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PUNJAB DISTRICT GAZETTEERS.

VOLUME XXX A.

LAHORE DISTRICT,

WITH MAPS.

1916.

COMPILED AND PUBLISHED UNDER THE AUTHORITY
OF THE PUNJAB GOVERNMENT

Lahore:
PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRINTING, PUNJAB,
1916.

PREFACE.

The present edition of the Lahore District Gazetteer is partly based upon Mr. Casson Walker's edition of 1893-94, but to a much larger extent is quite new matter. Not only has much of the old edition had to be cut to comply with the limitations of space imposed upon a modern Gazetteer, but thanks to the courtesy of many gentlemen, who have contributed notes and information, a great deal of fresh material has brought the volume up-to-date. Lest it should be thought that History and Archæology have been treated with a brevity inconsistent with their importance in a district, which contains the capital of the province, it should be noted that these subjects may be dealt with later in a separate official Guide-book to Lahore. The gratitude of the compiler is due to those who have so kindly helped, a list of whom, arranged in the order in which the information supplied has appeared in the text, is given below. The compiler offers his apologies for the extent to which it has often been necessary to abridge contributions and for omissions, if any, of names from the list :—

Mr. R. N. Parker, Deputy Conservator of Forests; Mr. H. Whistler, Superintendent of Police; Mr. Beni Parshad of the Government College; the Honorary Secretary, Bombay Natural History Society; the Warden of Fisheries, Punjab; the Director-General of Archæology; Mr. H. Hargreaves of the Archæological Department; the Sanitary Commissioner, Punjab; the Civil Surgeon, Lahore; Mrs. Mary Caleb; the Secretaries of the District Board, of the Municipal Committees of Lahore, Kasúr, Chúnián and Khem Karan, and of the Notified Area Committees of Patti, Khudián, Pattoke and Padhána: the Chaplain to the Bishop of Lahore; the Secretary to the Catholic Bishop of Lahore; the Wesleyan Chaplain; the Secretaries of the Church Missionary Society, the British and Foreign Bible Society (Punjab Auxiliary), the Punjab Religious Book Society, the American Presbyterian Mission and the Methodist Episcopal Mission; the Revd F. Lawrence of St. John's Divinity College; Brigadier Melling of the Salvation Army; the Secretaries of the Anjuman-i-Himayat-i-Islam, of the Sat Sabha, of the Brahmo Samaj and of the Dev Samaj; Khan Sahib Haji Nur Burhan; M. Waris-ud-Din; Bhai Mehr Singh, Chawla; Khan Sahib Chaudhri Sultan Ahmad, Extra Assistant Settlement Officer; the Director of Land Records; the Superintendent of the Agri-Horticultural Gardens, Lahore; the Superintendent of the Lahore Circle, Army Remount Department; the Chief Superintendent, Civil Veterinary Department; Colonel H. T. Pease and Khan Bahadur Sayad Mahtab Shah of the Punjab Veterinary College; the Sub-Divisional Officer, Lahore Sub-Division, 2nd Division, Upper Bari Doab Canal; Lala Gopal Das, Head Clerk of the Settlement Office; the Principal of the Mayo School of Art; the Chief Examiner of Accounts, North-Western Railway; the Assistant Secretary to Government, Public Works Department, Buildings and Roads, the Superintending Engineer of the 3rd Circle and the Executive Engineers of the 1st and 2nd Lahore Provincial Divisions of the Public Works Department; the Post Master-General, Punjab and North-West Frontier Circle; the Superintendent of Telegraph Engineering, Lahore; the Deputy Commissioner, Lahore; the District and Sessions Judge, Lahore; Lala Sita Ram Kohli, B.A., Research Student, and Babu Shiv Parshad, 2nd Clerk, Settlement Office; the Executive Engineers, 2nd, 3rd and 4th Divisions, Upper Bari Doab Canal, of the 2nd Division, Lower Bari Doab Canal, and of the Upper

Sutlej Inundation Canals Division; the Station Staff Officer, Lahore Cantonment; the Officers Commanding the Punjab Light Horse, the 1st Punjab Volunteers Rifles and the North-Western Railway Volunteer Rifles; the Inspector-General of Prisons, Punjab; the Registrar of the University of the Punjab; the Agent of the North-Western Railway; the Director of Public Instruction, Punjab; the Inspector of Schools, Lahore Division; the Principal of the Aitchison College; the Honorary Secretary, Lady Aitchison Hospital Committee; the Principal of the Medical College, Lahore; the Medical Officer in charge of the Lahore Cantonment General Hospital and the Consulting Architect to Government, Punjab.

The Superintendent of the Government Press has as usual shown himself prompt, obliging and helpful.

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CHAPTER I.—DESCRIPTIVE.

Section A.—Physical Aspects.

(*a*) The district takes its name from that of the head-quarters. Loháwar means "the fort of Loh," the son of Ráma, and the name is not peculiar to the capital of the Punjab. There is a Lahore in Afghánistán, the seat of a Rájpút colony; another in the Pesháwar District, another in Hindustán proper, and a Lohár in the Mewar State of Rájpútána. It appears in Muhammadan writers under the varied forms of Lohár, Loher, Laháwar, Lehowa, Loháwar and Rahwar; in the chronicles of Rájpútána it is mentioned under the name of Lohkot, and in the Deshvi-bhága it is called Lavpur. Name.

(*b*) The district, which lies between North Latitude 30° 38′ and 31° 44′ and East Longitude 73° 38′ and 74° 58′ is one of the five districts of the Lahore Division and comprises the whole of the plain country lying between the Rávi River on the north and the Sutlej on the south from the Amritsar District boundary on the east to that of Montgomery on the west, alongwith a narrow belt of a few miles in width on the right bank of the Rávi. In shape it is a regular quadrilateral, tilted in the general north-east and south-west direction of the rivers. The northern side marches with the Gujránwála District and the southern with Ferozepore. The mean length from east to west is about 64 miles and the mean width from north to south is about 38 miles. Differences in various places from these measurements are not great. From the Kaisar-i-Hind Bridge over the Sutlej to a point about 2 miles north of Sháhdara on the Gujránwála border is a distance of 48 miles. The total area according to the recent Settlement measurements is 2,738 square miles. Boundaries, area and general configuration.

The tract is divided into three *tahsils*, of which Lahore and Kasúr on the east, lying north and south respectively, divide between them laterally slightly the larger portion, Chúnián on the west occupying all the remainder. Kasúr has a frontage of over 40 miles on the Sutlej and Lahore, of slightly more on the Rávi, while the Chúnián *tahsíl* has nearly 30 miles on the former and slightly less on the latter river. All three *tahsíls* take

CHAPTER I.—A.

Physical Aspects.

Boundaries, area and general configuration.

their names from the *tahsíl* head-quarters whose latitude and longitude are as follows :—

Town.	North Latitude.	East Longitude.
Lahore	31·34	74·21
Kasúr	31·6	74·28
Chúnián	30·58	74·0

Lahore is the capital of the province and the head-quarters of the Revenue District and of the Revenue and Civil and Sessions Divisions. The city, which has an elevation of 702 feet above sea-level, is situate on the left bank of the Rávi about a mile from its present course and stands on the Delhi-Peshávar grand trunk road. The Civil Station now extends to lands comprised in ten adjoining land revenue estates besides the estate of Lahore itself. The Cantonments of Lahore are situated some three miles east of the Civil Station in land which once formed part of the old land revenue estate of Mian Mir. The Railway Station is the principal junction of the North-Western System. Lahore District stands 15th in order of area, 1st in order of population, and 6th in order of cultivated area among the districts of the Province. It contains 3 per cent. of the total area, 4 per cent. of the cultivated area and 5 per cent. of the population of the British territories of the Punjab.

The district divides itself naturally between (*a*) the central uplands, including portions of all three *tahsíls*, and (*b*) the alluvial lands of the Rávi (both banks) and Sutlej (right bank). There are no hills of any kind.

The high upland tract, which forms the central and principal portion of the celebrated Mánjha, the home of the Jat Sikh, occupies practically the full length of the Amritsar border on the east side of the district but gradually contracts towards the west as it approaches the Montgomery border. In its natural condition, before the extension of the Upper Bári Doáb Canal which now irrigates it throughout, the Lahore Mánjha presented an almost uniformly level surface with hardly any variety of feature from end to end. Its soil is inclined to be dry, but in parts near the Amritsar border one meets with a good sandy loam. The well water is mostly saline and the rainfall is very precarious. Until therefore irrigation was imported by means of the canal, there was little natural growth of any sort and the

agriculture was mostly inferior. In 1854 the Settlement Officer described this part of the district as a sparsely populated tract without the means of obtaining good drinking water for man or beast. Now the whole of the Mánjha is traversed by branches and distributaries of the canal, a prosperous canal colony has sprung up, further irrigation in a few villages in the north-west corner has been introduced from the new Lower Bári Doáb Canal, and the country yields to none in the matter of close and remunerative cultivation.

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Physical Aspects.

Boundaries, area and general configuration.

The lowlands which lie to the south of the Mánjha are known as the Hithár, derived from the vernacular term *het* (below); they were the valley of river Beás when it flowed through this district separately from the Sutlej. The high bank referred to above as the southern boundary of the Mánjha immediately overhangs the Sutlej and Beás streams, as they enter the district together at Harike on the Lahore and Amritsar border; from there the bank takes a westerly direction and the river flows south-west; the two therefore gradually diverge further and further apart until, as they both leave the district at the Montgomery border, they are separated by a distance of 25 miles. Under the high bank the old channel of the Beás can be very distinctly traced; along its edge at various intervals are village settlements, including those of Kasúr and Chúnián, the two most important places in the district outside the Lahore city. The proximity of the houses to the bank in these settlements shows how reluctantly the people used to move back to the nearest unoccupied land as the river encroached. In the Hithár tract between the high bank and the river village settlements are numerous and the population is fairly dense. Cultivation is carried on partly by aid of irrigation wells and partly by inundation from canals which only flow however for such part of the year as the river remains in flood. The soil is for the most part a soft alluvial loam yielding readily to tillage but almost too sandy to be genuinely fertile. There is much sandy waste in which nothing grows but the *sirkána* or river jungle reed which is fairly abundant and comes in useful as cattle fodder and for various other purposes. Every here and there tortuous *nálas* or low-lying depressions of land mark the course of the river and its branches in former days.

Rivers, lakes, marshes, and drainage lines—The Rávi.

(*c*) The Rávi (the present name means "Sun"), the *Hydraotes* of *Arrian*, the *Parushni* of the *Vedas* and the *Iravati* of classical *Sanskrit* authors, is the smallest of the five rivers of the Punjab and from the narrowness of its channel and its numerous windings is the least useful of them all for navigable pur-

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The Rávi.

poses. The Rávi enters the district from Amritsar by the village of Ichogil, and after the course of 63 miles leaves it on the borders of Montgomery close to the village of Alpa Kalán. The stream is nowhere navigable in this district, but *deodár* timber is floated down from the Chamba forests as far as Lahore. Two bridges distant apart less than half a mile cross the Rávi near Lahore, one the Railway bridge and the other a bridge for the traffic of the Grand Trunk Road. The latter, opened in 1915, surperseded the picturesque old Bridge of Boats which used to span the river lower down at the old *Baradari* of Kamrán. At Balloke, in *tahsíl* Chúnián, about 11 miles as the crow flies from the Lahore *tahsíl* border, a passage has been provided for all but wheeled traffic across the structure of the level crossing inaugurated in 1913.

The following are the dimensions of the two bridges near Lahore :—

——	Total length in feet.	Number of spans of girders.
Railway bridge ...	1,462	15
Road bridge ...	1,469	15

Elsewhere communications across the Rávi are kept open by ferry boats, and 22 stations, of which 18 are in the Lahore *tahsíl*, are maintained at intervals along the whole river's course. Just above Lahore city the course of the stream is carefully directed by embankments designed to protect the railway from injury by floods, and the river, which used to throw out several branches between Lahore city and the Amritsar border, is now kept to one channel. For about five miles above the level-crossing at Balloke the bed has been straightened for the purposes of the Irrigation Department, and at this point two extensive protective embankments have been constructed. "Formerly," wrote the compiler of the 1893-94 Gazetter, "the river channel was much narrower and its stream consequently much stronger than it is now. People say that 20 years ago it was unfordable at any time, hot weather or cold ; now for at least four months of the year it can be crossed on foot, and often in the cold weather it dries up altogether just after leaving the Lahore District. This is largely due to the extensive widening of the bed consequent on the river having encroached steadily to the north of late years. Also in the cold weather the volume of water is materially decreased by

CHAPTER I.—A.

Physical Aspects.

The Rávi.

the calls made on it for the Bári Doáb Canal." Still, however, during the rainy season in some years the river has heavy floods with a very strong current and in the upper parts of its course through this district land is often submerged. Alterations in the course of the Rávi are frequent and extensive. Those that have occurred within the last 20 years are shown in the map attached. In *tahsíl* Chúnián the Rávi has on the whole worked steadily further north; in Lahore the greatest eccentricity is shown at a point about eight miles from where the river enters the district and for about the last eight miles of its course in the *tahsíl*. In Lahore and that portion of the Chúnián *tahsíl* in which the villages on both sides belong to the Lahore district a fixed boundary established by valid custom exists between the villages on either bank; in the rest of the Chúnián *tahsíl* permanent boundaries were fixed in 1905 between the villages belonging to this district and those of the Montgomery District which confront them. The land of the Rávi basin is mostly under cultivation. Its soil varies greatly according to the level of the land. High and low land occur alternately, the low land lying principally in depressions of the surface in which the river or one of its branches has rested at some previous time. These always contain more or less clay deposit which is very fertile for wheat crops so long as it gets inundation, but if left dry becomes hard and impenetrable with a strong development of saline matter. Outside these depressions the land varies from high sandy waste in which only river jungle can grow to a light loam fairly productive and easy of cultivation. On the left side the Rávi lowlands are separated from the uplands of the Mánjha by an abrupt bank varying from 4 to 20 feet in height; only in parts near Lahore has this bank entirely disappeared under the process of cultivation. On the right hand side of the river the boundary of the river valley is more difficult to detect. Occasionally the rise from the present alluvial tract to the high ground beyond the river influence is marked by an abrupt bank which however seldom exceeds four or five feet in height; more often, however, the slope up is very gradual and a change in soil or vegetation alone indicates that the land which can claim any recent experience of the river floods has been left behind.

The Sutlej.

The Sutlej (*Satlaj*; the *Zaradros* of Ptolemy and Arrian; the *Satudri* or *Satadru* of the Vedas) river on the south, having been joined by the Beás just before it enters the confines of this district, has a considerably greater volume than the Rávi and its fall is more rapid. The velocity of the current during the

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The Sutlej.

cold weather is about five miles an hour; and its ordinary depth about four feet. It is said that the stream used to be navigable for steamers as far up as Ferozepore (half way up the Lahore District); now, however, all such traffic has been absorbed by the railway. The Sutlej road and railway bridge, which crosses the river at Ganda Singh Wála, was opened in 1887; before that the river was crossed by a bridge of boats at the place where the railway bridge is now. Ferry boats are maintained at intervals along the river throughout the year. The valley of the Sutlej is of considerable width and the stream is constantly shifting its course. Throughout the last 20 years the main current in the Kasúr *tahsíl* has shown no distinct preference for either the Lahore or the Ferozepore bank; in Chúnián it has worked steadily further north. Alterations in the course of the river are indicated in the map. Permanent boundaries under the Riverain Boundaries Act between the villages of the Lahore and Ferozepore Districts were fixed in 1912-13. The Sutlej bed is a mixture of sand and clay; in the rainy season its floods throw up vast quantities both of deposit and of sand so that the character of the alluvial land is constantly changing. The bare sand of one year may be a rich deposit soil in the next and *vice versâ*. On the whole there is much more bad land than good along the Sutlej; large stretches of river jungle frequently occur with only occasional patches of cultivation, and in the latter the cropping is indifferent as a rule.

Lakes and marshes.

There are no lakes in the district. The only permanent bodies of water of any importance are those brought down (*a*) by the Patti *nála* to below the Beás high bank in *tahsíl* Kasúr and (*b*) by the Hudiára *nála* to certain villages on the Amritsar border in *tahsíl* Lahore. In years of heavy rain considerable stretches of water stand under the bluff and even extend two or three miles south of it throughout the eastern half of *tahsíl* Kasúr, doing considerable harm in places by promoting the spread of *kallar*; they also, however, provide fairly promising ground for the sportsman; Bahádar Nagar, the Railway Station for which is Waltoha, is the best of these shooting places and produces duck and snipe. In Lahore *tahsíl* the upper reaches of the Hudiára, about the village of Padhána, are often worth a visit for duck. Speaking generally, the *jhíls* of the district do not assist agriculture, rather the reverse, though rice and *rabi* crops are sometimes grown on the banks when the high water has subsided, and *jhallars* are set up on the banks. Water caltrops (*singhárá*, *Trapa bispinosa*) are a natural product. The water-supply of the district in general is ample.

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Drainage lines.

In the high lands of the Bári Doáb there occur at intervals drainage lines which are called in the vernacular *rohi*. The most important is the Hudiára *rohi*, which enters the district from the Amritsar border at the Lahore village of Kila Jíwan Singh, about 15 miles south of the Rávi, and passes across the Mánjha in a tortuous course generally parallel to that of the two rivers, ultimately draining into the Rávi shortly before it reaches the Montgomery border. Its channel is from two to three hundred yards broad and it is so shallow that the casual observer in crossing it would hardly notice its existence unless the floods were out. During the rainy season a considerable volume of water comes down this channel sometimes, mostly local surface drainage. The soil in the channel, though stiff, is very fertile under cultivation, and except in the driest years it is safe for a fair spring crop.

The next best known *rohi* is that called the Kasúr *nála* which enters the Kasúr *tahsíl* from the Amritsar district at the village of Súr Singh about 12 miles to the south of the Hudiára *rohi*. This has a deeper channel than the other and when in flood sends down a more rapid stream. It can be traced back as far as Batála in the Gurdáspur District. The channel of the Kasúr *nála* is shallow enough to cultivate for the first 10 or 12 miles of its course as far as the village of Algon. From there it has been converted into a canal escape and assumes the appearance more or less of a hill-torrent. It runs into the Beás lowlands near Kasúr. Similarly the Patti *nála* further south has been utilised as a canal escape two or three miles after it enters the district at Patti.

Both the Kasúr and the Patti *nálas* have their course marked by ridges of sand thrown up no doubt by the force of the water when in heavy flood. The Hudiára *rohi*, having a much gentler slope, has deposited no sand along its banks. These drainage lines are important chiefly with regard to the influence they have on the local spring water. The only part of Mánjha uplands where the well water is naturally sweet is along the Amritsar border on the east and between the Rávi and the Hudiára *rohi* on the west. It is also found to be sweet within the drainage channels and along their banks especially in the case of the Kasúr *nála* which in former years probably used to carry down a heavier volume of water than the others. Between the Kasúr *nála* and the Hudiára *rohi* the water is universally tainted, more so to the west than the east. Towards the Montgomery border it is absolutely undrinkable, much more unfit for irrigation of land. Beyond the Hudiára *rohi* and between it

CHAPTER I.—A.

Physical Aspects.

Drainage lines.

and the Rávi the water is fairly sweet, becoming less and less tainted as the *rohi* channel drains towards the river. In the year 1908-09 extensive damage was done in the Lahore *tahsíl* by heavy floods in the Hudiára; a central cut was made by the Canal Department after that year about to the point where the Railway crosses the *rohi* and has been generally successful in disposing of the excess water carried. Of the Kasúr *rohi* the compiler of the 1893-94 Gazetteer wrote that flood waters which used to fill it several times in the year had been diverted by canal embankments and cultivation. The Patti *rohi* is now more destructive in its action than it was 20 years ago, a result that may in part at least be ascribed to the fact that, the general spring level having risen, the soil is less able to absorb rainfall, which accordingly passes off as surface-water.

Geology.

(*d*) The soil of the district is entirely alluvial; its local geology has not accordingly been made the subject of any separate detailed investigation. Some general information will be found in Medlicott's pamphlet on the Geology of the Punjab, published by the Geological Survey of India. The only mineral products of any value are *kankar* and *kallar*. *Kankar* (a kind of limestone gravel) is used for metalling roads, the smaller particles being burnt for lime; this mineral is found in most parts of the district, but principally in the highlands near Lahore; it is dug out at a depth varying from one to six feet, while the smaller particles are found on the surface of the soil in many places and only require sweeping up for collection before being put into the kilns to be burnt down as lime; *kankar* is now worked not only by contractors who pay the owners for the right, but by the owners themselves who often both dig and carry it in their own carts to railway stations or to Lahore.

Kallar is a grey powdery substance produced intermittently from old village sites and similar places in the Mánjha uplands which is used both as a manure and for the manufacture of crude saltpetre. As a manure *kallar* is used as a top-dressing for young cotton and tobacco when about half a foot or so out of the soil; its fertilising properties are shown by chemical analysis to be due to the presence *inter alia* in a soil which has long been the receptacle of the evacuations of men and cattle of soluble chlorides and nitrates, the valuable soluble ingredients developing by exposure to moisture and heat during a considerable period and transforming by chemical changes certain insoluble into soluble salts. *Kallar* is, however, much more commonly used for the manufacture *in situ* of crude saltpetre, the owners of the land finding it very much to their advantage to grant

CHAPTER I.—A. Physical Aspects. Geology.

leases to contractors who make refining a business and pay handsome sums for the right. The *kallar* earth is collected and spread over filter beds which are copiously watered from unlined wells sunk immediately alongside; the filtered solution is then run down to cement-lined floors where it is dried by the natural heat of the summer sun; at the recent Settlement there were found to be 151 *kallar*-producing sites yielding their owners an income of Rs. 11,332.

Botany.

The *flora* of the district in common with that of most districts in the Punjab Plains has been greatly modified by human agency. At one time the whole area must have carried an open forest of small trees and shrubs. The settlement of the country, the extension of canal irrigation and the construction of railways have led to the rapid disappearance of the original vegetation of which the only remains are the *rakhs* or portions of the original forest which have not been cultivated and are kept as grazing grounds for goats, cattle and camels. Even they have not been left in their original condition but have probably all been felled at one time or another chiefly in order to supply fuel for the railways, which for many years burnt wood.

The *rakh* vegetation.

The rakhs consist of an open growth of low trees, commonly about 20-30 feet in height and 1-3 feet in girth. The trees are usually isolated or occur in isolated groups, the ground between being more or less bare except for a few shrubs, but after good rains a fair crop of grass springs up and remains green for a few months. The general aspect of the *rakhs* is very monotonous, the vegetation remaining unchanged mile after mile, and there are no land-marks so that if they were bigger it would be easy to get lost in them. The growth is composed mainly of three kinds of trees *jand* (*Prosopis spicigera*), *karíl* (*Capparis aphylla*), and *ván* (*Salvadora oleoides*). These three are usually found mixed but occasionally one or other is absent and sometimes *reru* (*Acacia leucophlœa*), and *farásh* (*Tamarix articulata*) are also found. *Malla* (*Zizyphus nummularia*) is common throughout, but many other shrubs are also found and are often abundant. Climbing plants are very common, growing particularly over *karíl*. The commonest climbers are ***Pentatropis spiralis*, *Cocculus Leœba*,** *Dæmia extensa*, *Rivea hypocrateriformis* and ***Maerua arenaria*;** one or more of these climbers is almost certain to be found growing over every large *karíl*.

Indigenous trees—*Jand*.

Jand (***Prosopis spicigera***, Linn.) is the most important tree in the *rakhs*. It is usually commoner than its associates and is much more valued as it produces an excellent firewood. The

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Physical Aspects.

Jand.

branches are lopped for feeding goats and camels. The young pods are sometimes eaten as a vegetable. The *jand* has a very large deep tap-root and in land cleared for cultivation the roots can usually be dug up and sold at a profit. The root often produces more wood than the stem and has been known to penetrate the soil vertically to a depth of over 60 feet. It flowers usually in April, the seed ripening in June, but some trees can be found in flower in November.

Karíl or *karír.*

Karíl or *karír* (*Capparis aphylla*, Roth.) is after *jand* the commonest tree in the *rakhs*. Sometimes it is more abundant than *jand*, but this is usually due to the *jand* having been cut for firewood and the *karíl* left being a bad fuel. The timber is often used for *karris* or rafters. The fruit is a bright pink colour and about the size of a cherry; when unripe it is often made into pickle. The flowers are scarlet and appear in April and a second crop is often produced in September but is less abundant.

Ván.

Ván (*Salvadora oleoides*, Dcne.) is found mixed with *jand* and *karíl* and usually less common than either of these trees in the *rakhs*, but on saline soils it often is the principal species. The wood is very little used and even as fuel it is not liked though it can be used for brick-burning. The *ván* is sometimes preserved in recently cultivated tracts as a shade tree for the benefit of cattle. The flowers appear in February and the fruit, known as *pílu*, ripens in June and is eaten by the poorer classes especially in times of scarcity.

Reru.

Reru (*Acacia leucophloea*, Willd.) is found in most of the *rakhs*. It is a good fuel and the bark can be used for tanning. It flowers in September and October.

Farásh or *Farwán.*

Farásh or *parwán* (*Tamarix articulata*, Vahl.) is the only indigenous tree which is cultivated. It grows fast and reaches a fair size and is easily propagated by cuttings. The timber is soft and not much used and as a fuel it is not particularly good. It is found growing naturally on saline soils in depressions where water collects.

Indigenous shrubs—*Malla.*

Malla (*Zizyphus nummularia*, Lamk.) is the commonest shrub. It is cut and used for fencing fields, usually after the leaves have been threshed out and used as fodder. In November it produces a small red fruit which is largely eaten by grass-cutters, graziers and others. It flowers in August and September.

Kangar or *Kango.*

Kangar or *kango* (*Lycium europaeum*, Linn.) is fairly common in the *rakhs*. In the autumn it produces small white tubular flowers which are followed by bright red fruits the size of a small pea.

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Ák. *Ák* (*Calotropis procera*, R. Br.) is a common shrub on fallow lands and in waste places. It is easily recognized by its large leaves and copious milky juice. It is almost always in flower.

Résham. *Résham* (*Pluchea lanceolata*, Oliv.) is a small shrub two or occasionally three feet high. It is found in dense patches especially near the Sutlej. It flowers during and after the rains.

Pilchi. *Pilchi* (*Tamarix dioica*, Roxb.) is found on moist sandy soils along the Rávi and Sutlej. It is used for wicker-work, baskets, etc.

Láni, Láni. *Láni* (*Salsola foetida*, Del.) and *láná* (*Suæda fruticosa*, Forsk.)—These two plants are often confused by natives and the names *láná* and *láni* are often interchanged or used for the same plant in different stages of growth. The two plants are really quite distinct, *Suæda* having thick cylindric leaves one quarter to half an inch long whereas in *Salsola* the leaves are very much smaller. Both are found in saline soils and are very common. They flower in September and in the cold weather *láni* is covered with its fruits which are furnished with five small horizontally spreading silvery wings. The foliage of *láni* is bright green, whereas *láná* has a dusky purple or grey hue.

The herbaceous vegetation. Annual and herbaceous perennial plants, apart from the grasses which are dealt with separately, may be roughly divided into two classes—those which spring up during the monsoon and those which spring up after the winter rains. These two classes are naturally quite different just as the crops grown in the *rabi* season are different from those of the *kharíf*. It is difficult if not impossible to say which of these plants are truly indigenous in the district and which have been introduced. The weeds of cultivation mostly belong here and a few are worth mentioning:—

Weeds of cultivation—Piyázi. *Piyázi* (*Asphodelus tennifolius*, Cavan.), sometimes called *bhukla* or *bughát*, is a small bright green coloured plant with the appearance of a young onion. It is a common weed in wheat fields.

Bhakhra. *Bhakhra* (*Tribulus terrestris*, Linn.), a procumbent herb springing up after the winter rains. The woody fruit breaks up usually into five pieces each of which is armed with two hard spines which easily puncture bicycle tyres if ridden over paths and *kachha* roads and run into the feet of men who walk bare-footed.

Báthu. *Báthu* (*Chenopodium album*, Linn.), a common weed in the rainy season. In rich moist soils it attains a height of 10 feet.

Jantri. *Jantri* (*Sesbania aculeata*, Poir.) is a tall weed with yellow flower and long slender pendulous pods often found in cotton fields.

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Physical Aspects.

Harmal. Cultivated trees.

Harmal (*Peganum Harmala*, Linn.) is a perennial plant growing about a foot high. It is common on waste and fallow land and is said to indicate a bad soil. As a weed of cultivation it is not important and is only mentioned owing to its abundance.

The trees grown on roadsides, fields and villages are with the exception of the *farásh* all introduced plants. Several have been cultivated for a long time and are completely naturalized, such as the *kíkar, shísham, tút* and others. Some although they have been long in cultivation show no sign of becoming established and probably never will do so, for example, *barna, jáman* and *bor*. A few have not long been introduced but already show signs of becoming established near Lahore and these in time will probably spread throughout the district in suitable places though they may require a very long time to do so, *e g.*, the Paper Mulberry (*Broussonetia papyrifera*, Vent.) from China and Japan, the Mesquit (*Prosopis glandulosa*, Torr.) from North America and *Lucaena glauca*, Benth., from Tropical America.

The most important trees at present in culivation are :—

Kíkar.

Kíkar (*Acacia arabica*, Willd.).—This tree is the commonest in the district. It is cultivated on the edges of fields and on road-sides and springs up readily from seed. For the agriculturist it is a very valuable tree. The wood is hard and durable and is used for buildings and agricultural implements. It is an excellent firewood and makes good charcoal. The bark is used for tanning. The branches are lopped for fodder and are used for fencing fields. It flowers in the autumn and ripens its seeds in the hot weather.

Shísham or *Táli.*

Shísham or *Táli* (*Dalbergia sissoo*, Roxb.).—Though not as common as *kíkar* on fields it is the chief tree for planting on road-sides and canal banks. The wood is valuable, being used for most purposes for which *kíkar* is suitable and in addition for furniture and wheels of carts. It flowers in the spring and ripens its fruits in the cold weather.

Ber.

Ber (*Zizyphus jujuba*, Lamk.) is commonly planted in fields and villages for shade and for fruit. The fruit is something like a plum and varies considerably in size. The best varieties are propagated by budding. The wood is put to the same uses as that of *kíkar*.

Tút.

Tút (*Morus alba*, Linn.) is planted for shade and for its fruits. The best varieties are propagated by budding. The wood is used for tool handles, shafts of carriages and for turnery. It grows readily from seed and cuttings.

Siris or *Sirín.*

Siris or *Sirín* (*Albizzia Lebbek*, Benth.) is valued owing to its rapid growth. It is very easily grown from seed. The wood is not much used though it is good and fairly durable. The branches are lopped for fodder.

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Dharék or *Bakain.*

Dharék or *bakain* (*Melia Azedarach*, Linn.) is also mainly valued owing to its rapid growth and to the ease with which it is propagated by seed. The wood is used for rafters and for the sides of bedsteads.

Phulai.

Phulai (*Acacia modesta*, Wall.).—This tree is very slow in growth, but is hardy and consequently is often grown in hedges and in dry places where better trees would not thrive. The wood is very hard and durable, but as the tree is not very common it is not much used.

Ním.

Ním (*Azadirachta indica*, Juss.).—In certain parts of the district this tree is common but not in the canal-irrigated tracts as it suffers much from frost when young and appears to dislike canal irrigation. It is planted in villages and gardens for shade and the leaves are used for keeping insects out of clothes. It requires protection from frost for several years after planting.

Pipal.

The *pípal* (*Ficus religiosa*), *bor* (*Ficus bengalensis*), and *tún* (*Cedrela Toona*) are sometimes planted for shade. The *jáman* (*Eugenia Jambolana*) and *lasúra* (*Cordia Myxa*) are planted for shade and for fruit. The *barna* (*Cratæva religiosa*) and *amaltás* (*Cassia Fistula*) are occasionally planted for their ornamental flowers.

Grasses.

The following are the most important grasses of the district :—

Kabbal.

Kabbal (*Cynodon Dactylon*, Pers.).—This grass is well-known to Europeans under the name of *dúb*, but must not be confused with *dab*. It is abundant on road-sides, canal banks and waste places where cattle graze as it is able to stand heavy grazing better than almost any other grass. In very dry places and on *kallaráthi* soil it is not found. It is one of the best grasses for fodder especially for horses and is universally used for making lawns.

Chhimbar.

Chhímbar (*Eleusine flagellifera*, Nees.).—This grass is not unlike *kabbal*, but grows rather taller and is not so dense. The flowering spikes are much shorter and thicker than in *kabbal*. It is a good fodder grass and very common, growing in somewhat dryer places than *kabbal* and not objecting to a small amount of *kallar* in the soil.

Dháman.

Dháman (*Pennisetum cenchroides*, Rich.).—A very good fodder grass, common but usually mixed with other kinds of grass. It is not found in very dry places except occasionally under the shelter of shrubs and bushes.

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Gharm.

Gharm (*Panicum antidotale*, Retz.).—A tall grass often 3-4 feet high. It is said to be a bad fodder, but this is perhaps because it is found in places where cattle cannot easily get at it owing to the protection of shrubs and bushes amongst which it grows. It is not found in the open. The older stems are nearly as thick as a pencil and are hard and woody.

Sawánk.

Sawánk (*Panicum Crus-galli*, Linn.).—A good fodder grass, but only found in moist places and is common as a weed in cultivated ground.

Pálwán.

Palwán (*Andropogon annulatus*, Forsk.).—A good fodder grass but mainly found in moist places.

Khávi.

Kháwi (*Andropogon laniger*, Desf.).—A tufted grass common on soils containing a little *kallar*. It is remarkable in having scented roots and is sometimes used like *khas-khas* for making *tatties*. It is not appreciated as fodder.

Káhi.

Káhi (*Saccharum spontaneum*, Linn.).—A coarse tall grass mainly found along the Rávi and Sutlej usually in wet or swampy places. Used as fodder for buffaloes. This grass is conspicuous after flowering owing to the tuft of white cottony hairs which surround the fruiting spikelets.

Sír.

Sír (*Imperata arundinacea*, Cyrill).—Another grass with a similar fruiting panicle, apt to be confused with *káhi*. *Sír* prefers stiff badly ærated clay soils and is sometimes a bad weed in cultivated land as it has spreading roots and is difficult to eradicate. *Sír* is apt to come up in lawns and completely replace *kabbal*, the grass which is always planted in lawns.

Sarkána.

Sarkána (*Saccharum Munja*, Roxb.).—This is the largest and most conspicuous grass in the district. The flowering stems attain a height of 18 feet and a diameter of half an inch. It is common along the Sutlej and Rávi as well as along canal and railways lines, growing on the edges of borrow-pits and in moist places. Its uses are very numerous. *Munj* is a fibre extracted from the upper leaf-sheaths of the flowering stems. *Munj* rope is almost always used for Persian wells, boats and rafts and all purposes where ropes are used in water. It is also used for making matting and for the twine used in native bedsteads. *Sar* is the name used for the leaves which are used for fodder in times of scarcity. *Kána* is the thick portion of the flowering-stems and is used for coarse screens. The upper thinner portion of the flowering-stems is used for finer screens, mats and winnowing trays and is called *sirki*.

CHAPTER I.—A. Physical Aspects—*Dab*.

Dab (*Eragrostis cynosuroides*, Beauv.) is a coarse grass found mainly on stiff soils especially in low lying places where water collects. It is not a good fodder and like *sír* is sometimes difficult to eradicate in cultivated ground.

Lunákh or *Nunákh*.

Lunákh or *Nunákh* (*Sporobolus arabicus*, Boiss.).—This grass is characteristic of saline soils and in such soils it is frequently the only species of grass found. It is not a good fodder, but it is evidently eaten by cattle in the absence of better grasses and if a patch of bad *kallaráthi* soil is protected from cattle a fairly good crop of this grass soon appears in what was formerly bare ground. When *lunákh* is dry or if any other food is avail able it is not touched by cattle.

In Appendix A will be found a list of the trees, shrubs and woody climbers of the district.

Characteristic or noteworthy wild animals.

(*e*) Wolves and jackals are the only carnivora of any importance, the former being met with occasionally in the lowland wastes of the Chúnián *tahsíl*; jackals abound everywhere, as any one who spends a night within the limits of the Lahore district will speedily learn. In the last ten years 1,834 wolves were destroyed and Rs. 8,203 were paid as rewards for their destruction. Among the larger mammals, the porcupine, the desert and common Indian foxes, and the jungle cat occur; of the smaller mammals the common Indian gerbilie and various small rats are the chief representatives. Twenty years ago Lahore was a poor shooting district: now, owing to the extension of cultivation, it is a decidely worse one and sandgrouse and bustard, birds that affect dry waste country, are very rarely met with. In the length and breadth of the Mánjha the Chhánga Mánga Reserve is the only area in which one can rely on finding game other than water-birds, though the occasional grey and black partridge, sandgrouse, pigeon, hares and even ravine deer and black buck can be met with in the course of protracted tours.

The Chhánga Mánga *Rakh* is very thick and only the portions of it that have been coppice-felled the previous year can be successfully beaten; *nílgai*, pig and peafowl and hares abound; the black partridge, which can be had in the cotton on the outskirts of the reserve at the end of October and early in November and again in the early spring among the green wheat, is the best form of sport; permission to shoot is to be obtained from the Deputy Conservator of Forests, Lahore Division.

The Rávi riverain is disappointing ground though a few geese, *kunj* and duck are to be seen; the Sutlej Bet generally affords excellent rough shooting for the officer on tour who keeps his gun with him and has the leisure to use it. The main perma-

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Characteristic or noteworthy wild animals.

nent *jhíls* of the district and their capabilities for sport have been noticed under paragraph (*c*) of this section and chapter; besides them there are backwaters of the Rávi at Ichogil and Bhaini Dhillwan on the Amritsar border and certain sizeable pieces of water at villages in the extreme south-west of *tahsíl* Chúnián, between Kanganpur and the Sutlej, which on occasions provide sport. At all the places mentioned however netting and snaring goes on and the European sportsman who visits them without making previous enquiries will not be wise. Quail come in April and September and are netted in large numbers near the city.

In Appendix B is given a list of some 230 birds, including the Game Birds which occur, or are likely to occur, in the district. Attention is invited to the note at the end of the list.

Fishes.

The more important fishes of the Lahore District brought in for European consumption are :—

	Vernacular name.	Scientific name.	Remarks.
1.	*Rohu* or *Dhambra*	*Labeo rohita*	... A good table fish up to 50 lbs. and over.
2.	*Dai-Kalabau* ...	*Labeo calbasu*	... Good eating but full of bones. Runs up to 3 feet in length.
3.	*Mori* ...	*Cirrhina mrigala*	... A good food fish. Runs up to 30 lbs.
4.	*Mali* ...	*Wallago attu*	... A common and valuable food fish.
5.	*Thaila* ...	*Catla buchanani*	... Good eating—the largest of plains carp. Runs up to 6 feet length and 100 lbs.
6.	*Tarkanda* (*Kagga?*).	*Rita buchanani*	... Esteemed by Indians. Often a very foul feeder.
7.	*Saul* (*Murral*) ...	*Ophiocephalus striatus.*	A valuable food fish. Very hardy. Very voracious. Guards its own nest.
8.	*Do. do.* ...	*Ophiocephalu spunctatus.*	(do.)
9.	*Chiniáru Chitratu* (*Máhásír*).	*Barbus tor*	... Not very common in Lahore District. Comes in after the rains.
10.	*Bachua* ...	*Pseudeutropius garua*	Small, about 1 lb. in weight, but quite the most palatable fish in the market.
11.	*Chilwa* ...	*Chela panjabensis*	... Very small, rises readily to fly and good eating.

The following are some other fishes of the Lahore District :—

	Vernacular name.	Scientific name.
1.	*Sing* or *Singála* or *Chiaja* ...	*Macrones aor.*
2.	*Gid* ...	*Labeo diplostomus.*
3.	*Dhaula* ...	*Ophiocephalus gachua.*

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Physical Aspects.
Fishes.

Vernacular name.	Scientific name.
4. *Khagga*	... *Clarias magur.*
5. *Singi*	... *Saccobranchus fossilis.*
6. *Pafta*	... *Callichrous pabda ? bimaculatus.*
7. *Bahm, Vahm Garoj*	... *Mastacembelus armatus.*
8.	... *Barbus punjabensis.*
9.	... *Aspidoparia jaya.*
10.	... *Rohtee cotio.*
11. *Chilwa*	... *Barilius vagra* (a valuable *larvicide*)
12. *Túk*	... *Chela phulo* (a valuable *larvicide*).
13. *Kunni*	.. *Labeo dyochilus.*
14. *Makni*	... *Ambassis nama.*
15. *Chidku*	... *Trichogaster fasciatus.*

The nomenclature of the less well-known fishes is difficult and misleading. The same name often applies to two or more different species, even in different parts of the same district. On the other hand two or more names are often given to the same species.

The *Sinsár* or *Ghariál* (*Gavialis gangeticus*, Gmel.) abounds in both rivers, being more plentiful in the Sutlej, and may often be seen in winter basking in the sun on the sandbanks of the Rávi. There is no record of the occurrence of the *Maggar* (*Crocodilus palustris*). Both the rivers are favourite haunts of the large mud turtle (*Trionyx gangeticus*, Cuv.). Many other kinds of tortoises are also found in both the rivers and in marshes and ponds. Of the huge water serpents mentioned in the last Gazetteer the Checquered Keelback (*Tropidonotus piscator*, Schn.) has often been taken swimming near the banks. Other water snakes and harmless snakes abound throughout the district. Of the venomous snakes there are five—two Cobras (*Naia tripudians*, Merr and *Naiabungarus*, Schleg), two vipers (*Vipera russellii*, Shaw, and *Echis carinata*, Schn.) and the *Krait*. Of these the vipers and the *Krait*, which are the most plentiful, are responsible for a large number of deaths. In the last decade 659 people have been reported as killed by snakes. Of the lizards the wellknown *Goh* (*Varanus bengalensis*, Daud.) and *Sakna* or Spiny Tailed Lizard (*Uromastix hardwickii*, Gray.) are quite common throughout the district. Many other species of house and jungle lizards are also to be found.

CHAPTER I.—A.

Physical Aspects.

Climate.

(*f*) Meteorological statistics will be found in Table 3 of volume B. The climate of Lahore, like that of north-west of India in general, is subject to large vicissitudes. From about the middle of December to the middle of March the air is very damp and cold, and light to moderate rain occurs at intervals in connection with cold weather storms. These storms are as a rule preceded by a wave of high temperature and followed by a cool wave, so that large and rapid changes are a characteristic feature of the temperature conditions of the season. During the passage of cool waves the thermometer may sink so far at night that sharp frost occurs. In the early morning of the 19th January 1889 and the 23rd December 1910 a reading of 29·2° was recorded under the Observatory shed at Lahore, but on the ground outside temperature sank much lower. The cessation of the winter rains is succeeded by a short-lived spell of very pleasant spring weather. In April temperature rises fast and the two succeeding months are very hot and dry. Hot westerly winds prevail frequently in the day-time and the heat is then trying in the extreme. Temperatures of upwards of 110 in the shade are of frequent occurrence in the second half of May and in June, the highest reading hitherto recorded being 120·3°. Dust-storms occur occasionally during the hot season, relieving temporarily the intensity of heat. Towards the end of June monsoon conditions appear and during the next two-and-a-half months spells of rainy weather alternate with intervals of sultry oppressive weather. The cessation of the rains about the middle of September is followed for two or three weeks by a rise of temperature in the day time, but thereafter pleasant cool weather sets in and lasts till about Christmas when the winter rains begin.

Temperature.

The mean annual temperature of Lahore is 76, that of January, the coolest month, 55, and that of June, the warmest, 94°. The average of all the maximum day temperatures of the year is 90°, the average of all the night minimum temperatures is 62°; the highest yet recorded is 120° and the lowest is 29°. The diurnal range is great; it amounts to 36° in November and only 19° in August. The humidity of the air is fairly high, the annual mean being 67 per cent. of saturation, that of May being 41 per cent. and that of December, January and February, the dampest months, about 80.

Rainfall.

(*g*) In Table 3 of the Statistical Volume B figures are given for the annual rainfall at each of the stations where raingauges are kept in the district, of which (including the

Rainfall.

recently established Balloki Station) there are now 12, as follows, *viz.*—

Tahsil.											
Lahore.					*Kasur.*		*Chúnián.*				
Lahore.	Lahore Cantonment (*c*).	Niáz Beg (*c*).	Manihála (*c*).	Wagha (*c*).	Kasúr.	Daftuh (*c*).	Chúnián.	Wan (Chánga Mánga) (*c*).	Bhamba (*c*).	Nijábat (*c*).	Balloki (*c*).

NOTE.—(*c*) means Canal Raingauge Station.

Table 4 gives the rainfall of each month at head-quarters. The average rainfall of the Lahore head-quarter station for the whole period 1859 to 1911 is nearly 21 inches, of which 13·63 fall from July to September in the monsoon season, while only an inch occurs from October to December in the period of the early winter rains. Variations in the annual rainfall are considerable, a maximum of nearly 31 inches (in 1908-09) and a minimum of less than 7 (in 1899-1900) being reached within a period beginning 1892 and ending 1912-13. Table 5 (Seasonal Rainfall at head-quarters of each *tahsil*) clearly shows the natural inferiority of the western portion of the district. Kasúr and Lahore, being about equidistant from the hills, fall within the same rain zone; Chúnián suffers from its remoteness from the hills. The district generally is well protected against drought; there are few parts of it which run any risk from excessive precipitation. In the winter particularly, the *rabi* being much the more important of the two harvests, there can hardly be too much rain provided it is well distributed; and winter rain gives growing crops in the riverain strength to withstand the intense cold of the tract. In the summer good rain checks boll-worm in cotton and other insect pests, extends the area under well cultivation and provides natural fodder for working cattle. Insufficient precipitation on the other hand means in the lowlands low rivers with curtailed areas under *sailáb* and inundation canal irrigation, and in the uplands tends to shorten the supplies in the perennial canals.

Cyclones, earthquakes and floods.

(*h*) Severe cyclonic storms are practically unknown; hail-storms are fairly frequent, especially in March and April, and often cause considerable damage to the crops. Floods are

CHAPTER I.—B. History. Cyclones, earthquakes and floods.

only local, being confined to the comparatively narrow alluvial belts bordering the two rivers. The district is sufficiently distant from the hills to be practically immune from earthquakes, the chief cause of which is the "main boundary fault" which runs through the Lower Himalayas from end to end of the Punjab; the earthquake of 1905 which worked such destruction in Kángra was however severely felt in Lahore, where many buildings were damaged.

Section B.—History.

Lahore City—Early history.

The history of the Lahore District is that of its chief towns Lahore and Kasúr, and their story is the story of the Punjab.

Of the condition prior to the Muhammadan invasions of the territory round Lahore now comprised in the Lahore District very little is known. The princes and people of Lahore however played an important part in the long continued struggle between Muhammadanism and Hinduism which marks the introduction of the former into India. Though legend attributes the founding of Lahore or Loháwa-rána to Lava, the son of Ráma, it is not probable that Lahore was founded before the first century A. D., as we neither find it mentioned in connection with Alexander, nor is it described by Strabo or Pliny. On the other hand, it may possibly be the Labokla of Ptolemy, as Amakatis, which is mentioned by that author as near Labokla, has been identified by Cunningham with the ruins of Ambá Kápi, about 25 miles from Lahore. The first certain historical record of Lahore is, however, that of Hiuen Tsiang, who mentions it as a large Bráhmanical city visited by him in A. D. 630 on his way to Jullundhur. About this time it is probable that the capital of the kingdom of Lahore was transferred to Siálkot, as Alberúni speaks of Lahore as a province whose capital was Mandhúkúr, and it is noticeable that Al Masúdi makes no mention of Lahore.

At the end of the tenth century the kingdom of Lahore was in the hands of a line of Brahman kings, and in A. D. 988 Jai Pál, the reigning monarch, was decisively beaten by Sabuktagín. Mahmúd did not visit Lahore for more than twenty years after his first invasion of the Punjab, though he defeated Jai Pál in 1001 and Anand Pál in 1008. Lahore City was not at this time a place of great importance. In 1034 Lahore was seized by Nialtigín, the revolted governor of Multán. He, however, was expelled, and in 1036 Lahore was made the capital of the Ghaznivid dominions east of the Indus. A final

CHAPTER I. B.

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insurrection by the Hindus at Lahore in 1042 was quelled by Maudúd, and the city was left in charge of Malik Ayáz, whom Muhammadan tradition regards as the founder. During the reign of the first eight Ghaznivid princes Lahore was governed by viceroys as the head-quarters of a province, but during the reign of Masúd III (1099–1114), it was made the seat of government of the empire. After Masúd's death Muhammad Bahlim, governor of Lahore, rebelled against Bahrám Sháh in 1119 but was defeated; and in 1153 Khusrú Shah again transferred the seat of government to Lahore, where it remained till 1193. The city was put to ransom by Muhammad of Ghor in 1181 and taken in 1186. From this time onwards Lahore was the centre of the opposition to the authorities at Delhi while subject to the constant incursions of the turbulent Khokhars who devastated the country round in 1205. On the death of Muhammad of Ghor in 1206 Kutab-ud-dín Aibak was crowned at Lahore; his lieutenant Kubácha lost the city to Táj-ud-dín Yalduz in 1206, but it was recovered by Kutb ud-dín in the same year. From the death of Arám Sháh in 1211 the province of Lahore became the bone of contention between Altamash at Delhi, Nasír-ud-dín Kubácha at Multán and Táj-ud-dín Yalduz at Ghazni. Yalduz in 1215 took Lahore from Nasír-ud-dín; but Altamash defeated him in the following year, and made himself master of the city in 1217. On the death of Altamash in 1236, Malik Alá-ud-dín Jani of Lahore broke out in revolt; and after he had been *defeated and killed*, Kabi-Khán-i-Ayáz of Lahore likewise rebelled in 1238 but submitted later.

Then follows a century during which Lahore lay at the mercy of incessant Mongol raids. It was taken by the Mongols in 1241, and put to ransom in 1246. The city was rebuilt by Balban in 1270; but in 1285 the Mongols returned, and Balban's son, prince Muhammad, was slain in an encounter on the banks of the Rávi, the poet Amír Khusrú being captured at the same time. Muhammad's son, Kai Khusrú, was appointed governor of the Punjab in his stead, but was murdered in 1287. The suburb of Mughalpura was founded about this time by Mongol settlers, and Dua the Chaghatai made a raid on Lahore in 1301. Under Alá-ud-dín Khilji, Ghází Malik, afterwards the emperor Tughlak Sháh, received charge of the territories of Dípálpur and Lahore as a warden of the march against the Mongols, an office he seems to have discharged with some success. However, the Khokhars took Lahore in 1342, and again in 1394, when it was recovered by Sárang Khán. In 1398 Lahore was taken by a detachment of Timur's army, and

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seems to have lain desolate till it was rebuilt by Mubárak Sháh in 1422. Jasrath Khokhar attacked Lahore in the same year, and again in 1431 and 1432, but without success; but in 1433 Shaikh Ali took the city, which however he had almost immediately to surrender. In 1441 Bahlol Khán Lodí was appointed to the fiefs of Lahore and Dípálpur and seized the opportunity of turning against his master Muhammad Sháh. Lahore seems to have enjoyed a period of peace under the Patháns; but in the reign of Ibrahím Lodí, Daulat Khán Lodí, governor of Lahore, revolted and called in the aid of Bábar. Lahore was plundered by Bábar's troops in 1524, but in his final invasion in the next year he passed to the north through Siálkot.

The Moghals.

The period of the Moghal rule was the golden time of the history of Lahore, which again became a place of royal residence and grew to be, in the language of Abul Fazl, "the grand resort of people of all nations"; it still retains many splendid memorials of this period. On the accession of Humáyún, Kámrán, his younger brother, took possession of Lahore and obtained the Punjab together with Kábul and Kandahár. In the struggle between Humáyún and Sher Shah, Lahore was the military head-quarters of the Mughals, and narrowly escaped destruction on their temporary defeat. Humáyún entered Lahore triumphantly in 1554, being received with every expression of joy; but after Akbar had come to the throne, the place was seized in 1563 by his younger brother Hákim, who, though expelled, made another assault in 1581, from which he was repelled by Akbar in person. Akbar held his court at Lahore from 1584 to 1598, where he was visited by some Portuguese missionaries, and by the Englishmen Fitch, Newberry, Leeds, and Storey. Some time after Jahángír's succession in 1605 prince Khusrú escaped from Agra, seized the suburbs of Lahore, and besieged the citadel; but he was quickly defeated and his followers put to death with great barbarity. Gurú Arjun was implicated in this rebellion and died in captivity, or, as the Sikh tradition has it, disappeared miraculously beneath the waters of the Rávi. His shrine still stands between the Moghal palace and the mausoleum of Ranjít Singh. Jahángír fixed his court at Lahore in 1622, and, when he died at Rajauri in Kashmír A. D. 1627, he was interred, in accordance with his express wish, in the garden of Núrjehán, his wife, who erected to his memory the mausoleum at Sháhdara. Lahore was the scene of the struggles between the rival claimants to the throne which ensued on the deaths of Akbar, Jahángír and Sháh Jahán, though between A. D. 1628 and 1657 the city enjoyed an interval of peace and

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prosperity under the munificent rule of 'Alí Mardán Khán and Hakím Alí-ud-dín, who is more commonly known by his title of Wazír Khán.

The Moghals.

During the reign of Aurangzeb, Lahore had but little connection with the political events of the time, as the attention of the emperor was chiefly directed to quelling the ruling power of the Maráthas in the Deccan and the rebellion of the tribes of Rájpútána. From the death of Aurangzeb (A. D. 1707) to the accession of Ranjít Singh the fate of Lahore was singularly unfortunate. As the capital of an outlying province, it was naturally the first to suffer from the weakness of the decaying Moghal Empire. Ruled over by governors inadequately supported, it became the *point d'appui* of Sikh insurrections. With the invasions of Ahmad Sháh, Lahore became an outpost of the Durráni Empire, but the hold upon it of the Kábul Kingdom was never overstrong, and its history henceforth derives its chief interest from the rise of the Sikhs.

The Sikhs.

Sikhism, which was destined to re-establish Hindu supremacy in Lahore, received by the martyrdom in connection with the struggles inaugurating the succession of Jahángír in A. D. 1606 of Gurú Arjan, the fourth successor of Nának and compiler of the Adi Granth, the stimulus that transferred it from a peaceful to a warlike religion. Almost immediately after the death of Aurangzeb, the Sikhs, who had been kept in subjection under his energetic rule, broke out into insurrection under a leader named Banda, and at length seriously threatened Lahore. The emperor Bahádur Sháh, son and successor of Aurangzeb (A. D. 1712) marched to Lahore, with a view of crushing the rebellion but died before he could achieve any decisive success. A conflict ensued outside the walls of Lahore between his son Jahándár and Azím-ush-shán, in which the latter was defeated and drowned in the Rávi. Under Farukh Síyar the Governor of Lahore was defeated by the Sikhs. He was succeeded by Abdus Samad Khán who defeated the rebels and took Banda prisoner; and under his son Zakariya Khan the province had peace for twenty-one years (1717-38). He, however, found it prudent to submit to Nádir Sháh, who accepted a ranson in lieu of plundering the city. Ahmad Sháh Durráni occupied Lahore in 1748, and again in his second invasion, after some resistance from Mír Mannu (Muin-ul-mulk), the new governor. Mír Mannu was succeeded by his widow, and her abduction by the Wazír was the pretext for Ahmad Sháh's fourth invasion (1755). Lahore was occupied and placed under prince Timúr, from whom, however, it was taken by the Sikhs under Jassa Singh. They were expelled by the Marathas in 1758, who installed Adína Beg as Governor. He

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died a few months later and the Maratha power was broken by Ahmad Shah's victory at Pánípat in 1761, while the Sikhs, who again besieged Lahore, were defeated in the following year with great slaughter at Barnála, Kabuli Mal being left as Governor of Lahore. The Sikh cavalry ravaged the country round, and after Ahmad Shah's seventh invasion Kábuli Mal was ejected and the Sikhs again became masters of Lahore. For the thirty years following Ahmad Sháh's final departure (1767-97) the Sikhs ruled in Lahore unmolested; then in 1797 Sháh Zamán appeared before the city and put it to ransom. The next year he appeared again, and on this occasion Ranjít Singh received from him on his retirement a formal grant of the chieftainship of Lahore. The rise of Ranjít Singh's power made Lahore once more the centre of a flourishing though ephemeral kingdom. The collapse of the Lahore kingdom under Ranjít Singh's successors forms a chapter of imperial history for which the Imperial Gazetteer may be consulted. In December 1846, the Council of Regency was established, and the British Resident became the real central authority at Lahore. On March 29th, 1349, at the conclusion of the second Sikh war, the young Mahárája Dalíp Singh resigned the Government to the British.

Kasúr Town.

Tradition refers its origin to Kusa, son of Ráma, and brother of Loh or Lava, the founder of Lahore. It is certainly a place of great antiquity, and General Cunningham identified it with one of the places visited by Hiuen Tsang in the seventh century A. D. A Rajput city seems to have occupied the modern site before the earliest Muhammadan invasion; but Kasúr does not appear in history until late in the Muhammadan period, when it was settled by a Pathán colony from the east of the Indus. These immigrants entered the town either in the reign of Bábar or in that of his grandson Akbar, and founded a considerable principality, with territory on both sides of the Sutlej. When the Sikhs rose to power, they experienced great opposition from the Patháns of Kasúr; and, though the chiefs of the Bhangi confederacy stormed the town in 1763 and again in 1770, and succeeeded for a while in holding the entire principality, the Pathán leaders re-established their independence in 1794 and resisted many subsequent attacks. In 1807, however, Kutb-ud-dín Khán, their last chieftain, was forced to give way before Ranjít Singh, and retired to his property at Mamdot, beyond the Sutlej. The town of Kasúr was then incorporated in the kingdom of Lahore. It consists of an aggregation of fortified hamlets, standing on the upland bank and overlooking the alluvial valleys of the Beás and the Sutlej. The Afghán element has now declined.

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An extract, succinctly describing the events at Lahore and in the district of 1857, from the Punjab Mutiny Report, is given at pages 42 to 44 of the 1893-94 Gazetteer. The disarming of the troops at Míán Mír on May 13th frustrated a plot for the simultaneous seizure of the fort with the treasury and arsenal and the outbreak of the troops in cantonments and the Ferozepore arsenal was thus indirectly saved. But for this, as the official report says, "the North-West Provinces and the Punjab must have been for the time irrevocably lost, the lives of all Europeans in these regions sacrificed, Delhi could not have been taken, and India must have been *ab initio* reconquered." Throughout the rebellion Lahore continued in a disturbed state. In July the 26th Native Infantry Regiment mutinied at Míán Mír, and, after murdering some of their officers, succeeded in effecting their escape under cover of a dust-storm. They were however overtaken on the banks of the Rávi and destroyed by a force under Mr. Cooper, Deputy Commissioner of Amritsar. The strictest precautions were adopted in and around the city, until the fall of Delhi removed all further cause of apprehension.

Subsequent history.

The subsequent history of the district is more social than political, and the period from the Mutiny to the present day has been one of steady economic and social development.

Constitution of the district.

As originally constituted the district lay wholly in the Bári Doáb, with the exception of a group of estates round Shahdara. In 1855, however, some three hundred estates were transferred from the Sheikhupura *pargana* in the Gujránwálá District to Lahore. The trans-Rávi estates were then divided up. A few went to the Chúnián and Lahore *tahsíls*, but the great bulk were made into a separate *tahsíl* with its headquarters at Sharakpur. In the same year a small group of estates was transferred to Gugera, but barring that and other similar transfers between Lahore on the one side and Montgomery or Ferozepore on the other, due mainly to river action, there was no great change in the constitution of the district until 1910, in which year the Sharakpur *tahsíl* was transferred bodily to the Gujránwála district.

Archæology

The principal antiquities are those of Lahore city. That Lahore formerly covered a far larger area than it does at present is at once apparent from the number and extent of the ruins which cover the face of the surrounding country. From the city walls to Shálamár, Mían Mír and Ichhra—a circle with a radius of some three or four miles—one is constantly coming across crumbling mosques, tombs, gateways and gigantic mounds. Some

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conception of the extent of Lahore in its palmier days may be formed from the fact that of thirty-six *guzars* or quarters into which Lahore is known to have been divided only nine are included within the area of the modern city. On the whole it may be considered probable that in its best days, that is during the reign of Sháhjahán, the city must have had a circuit of some 16 or 17 miles. The portion of the city outside the walls probably consisted of numerous thickly inhabited spots connected with the city gates by long *bázárs*. The intervals between these different quarters were filled up with tombs, gardens and mosques, whose remains now form a conspicuous feature in the aspect of the environs of Lahore.

Lahore of the Hindu period.

There are no architectural remains of the old Hindu city of Lahore, and there are some grounds for supposing that it did not occupy the same site as the modern city. Tradition points to the vicinity of Ichra, a village about three miles to the west, as the site of old Lahore.

Lahore under the Pathans and Moghals.

But there is not only a total absence of the old Hindu architectural remains. With the exception of two small mosques in the heart of the city, the Nímíwála *masjid* and Shiránwála *masjid*, and the ruins of one or two shrines, there are no architectural relics of an earlier date than the time of Húmáyún. This fact, coupled with the silence of earlier writers, leads to the conclusion that Lahore, at the period of the Pathán dynasties, though a place of considerable importance, was not remarkable for its extent or the beauty of its buildings. From an architectural point of view, Lahore is essentially a Moghal city; and its Muhammadan remains, with a few exceptions, are in the Moghal style, the exceptions being the tomb of Shah Músa, by the railway station, which is Pathán and the mosque of Maryam Makáni or Maryam Zamáni by the eastern gateway of the fort, the style of which is transitional between the Pathán and the Moghal. Three localities at Lahore are traditionally connected with the Ghaznivide period, and are looked upon as places of great sanctity,—the tomb of Malik Ayáz, who is said to have built up the walls and fortress of Lahore miraculously in a single night; the tomb of Sayad Izhák, in the quadrangle of Wazír Khán's Mosque; and lastly, the tomb of Dáta Ganj Bakhsh, a learned divine of Baghdád, the St. Odo of his day, who accompanied the victorious army of Mahmúd of Ghazni in the character of spiritual adviser and died at an advanced age at Lahore.

Remains of the Moghal period in Lahore.

In the old gateways leading to the fort we have examples of the bold and massive style of Akbar contrasting remarkably with the elegant but somewhat fantastic architecture of later

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periods. The elaborately carved buildings, with pillars of red sandstone, supporting a sloping *chhaja*, in the quadrangle of the citadel adjoining Jáhangír's *Khwábgáh*, are good specimens of the Hindu-Moslem style of art, characteristic of the time of Akbar. The *Khwábgáh* of Jahángír is a marble sleeping pavilion which stood within a large quadrangle enclosed on three sides by a colonnade of red stone pillars, intricately carved with bracket capitals, consisting of the figures of peacocks, elephants and griffins. In the centre of the fourth side, which overlooked the Rávi, stood a pavilion, in the Moghal style of architecture, and on either side at the point of contact of the colonnade with the outer wall were two chambers with verandahs of elaborately carved pillars supporting a sloping *chhaja* in the Hindu style. In the quadrangle was a garden, with a *chabútra* or platform, of marble mosaic, and beneath the pavilion and colonnades were underground chambers to serve as a refuge from the heat. In the tomb of Jahángír, at Shahdara; the Mosque of Wazír Khán, on the south side of the city; the Pearl Mosque; the throne room and marble pavilion in the citadel; the tomb of Asaf Khan; the Gardens of Shalamár; the *Gulábi Bágh* or "Garden of Rose-water"; the Gateway of Zeb-ul-Nissa; and the Imperial Mosque of Aurangzeb, we have examples of the Indo-Moghal style proper, with its usual characteristics of bulb-like domes, supported on elaborate pendentives, engrailed arches, marble lattice windows, and brilliantly enamelled walls. A special feature of the Moghal buildings is the profusion and excellence of the coloured tiling and enamelled frescoes (*káshi*).

Prince Kámrán, brother of the Emperor Humáyún, when Viceroy of the Punjab, seems to have given the first impulse to the architectural adornment of Lahore by building a palace and garden near the suburb of Naulakha and extending thence to the river Rávi. A *báradári*, said to have been built by Prince Kámrán, the oldest specimen of Moghal architecture in Lahore, which was used for many years as a toll-house at the old bridge of boats on the Rávi, is now a protected monument in the charge of the Archæological Department. All that remains of the palace is a large gateway now used as a private house in the vicinity of Lehna Singh's *chauni*.

Akbar made Lahore his capital for some fourteen years, during which time he repaired and enlarged and surrounded it and the city with a wall, portions of which still remain, though it was almost rebuilt at the commencement of the present century by Ranjít Singh.

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Remains of the Moghal period in Lahore.

"In the fort up to within a few years" wrote the compiler of the Gazetteer of 1893-94, "there were left some good specimens of the peculiar style of architecture adopted by Akbar; but they are nearly all destroyed; the Akbari Mahal, or chamber of Akbar, has been razed to the ground, and the smaller throne room has been so altered by modern additions that it is hardly recognisable as an antique building." Other architectural remains of the period are the tomb of Sháh Chirágh; the tomb of Kásim Khán, once the trysting-place of the Lahore wrestlers and now the residence of the Lieutenant-Governor of the Punjab; the tomb of Sháh Musa; and a mosque called the mosque of Kála Khán, on the right hand of the road from Lahore to Mián Mír. The Emperor Jahángír built but little, but there are specimens of his architecture in the greater *Khwábgáh*, or sleeping-palace; in the tomb of Anárkali and possibly in the *Moti masjid*, or Pearl Mosque, formerly the Chapelle Royal for the imperial *harem*. But the ascription of the latter to Jahángír is questioned by the latest authorities.

During the reign of Sháhjahán the palace was enlarged and beautified under the superintendence of Asaf Khán and the entire frontage covered with brilliantly coloured designs in tile work. The beautiful tomb of Jahángír, at Shahdara; the mosque of Wazír Khán, on the south side of the city; the Gardens of Shálamár; the gateway of the *Gulábi Bágh*; the *Idgáh*; the tomb of Mián Mír; the summer house of Wazír Khán; the gateway of Zeb-ul-Nissa; and lastly, the tombs which line the road between Anárkali and the Shalamár gardens, are among the works of the period. A smaller *Khwábgáh* was erected adjoining the western side of that built by Jahángír. To the left of the *Khwábgáh* was erected the range of buildings with octagonal towers, the largest of which is called, *par excellence*, the *Saman Burj* and contains the small though costly marble pavilion, inlaid with flowers wrought in precious stones and known as the *Naulakha*, and the celebrated *Shíshmahal*, used by Ranjít Singh as a reception room into which a new gateway called the *Háthi Pol* was opened for the Emperor's private use, through a garden which covered the space now occupied by the fort magazine and suggested a comparison with the hanging gardens of Babylon. Opposite the pavilion in Jahángír's *Khwábgáh* a *hammám* or suite of bathing rooms was erected, which served not only for the purpose indicated by the name but also as a cabinet council chamber, and in the centre of the fort enclosure, the once stately building known as the *Takht* or Throne-room of Sháhjahán. In the fourth year of his reign, the city having suffered much from the encroachment

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of the river, Aurangzeb had a massive quay of masonry constructed for upwards of three miles along the river's bank. The quay, it is said, was faced with lead; flights of steps, at intervals, led down to the water's edge; and rows of Persian wheels, projecting over the side, made the waters of the Rávi available for irrigating the gardens which lined its banks. The remains of the quay, or *Band* of Álamgír, as it is called, are still traceable between the north-east end of the fort and the village of Bhogíwál. But the great work of the period is the *Jami Masjid,* or Musalmán Cathedral, the most striking building at Lahore, whose white marble domes and almost colossal minarets may be seen for miles, a building said by some to have owed its origin to the Emperor's pious remorse for the murder of his brother, Dára Shikoh, and by others to a desire to eclipse the beauties of the mosque of Wazír Khán. The completion of this mosque may be said to close the architectural history of Lahore. Later attempts, such as the Golden Mosque of Bikhári Khán, and the Palace and Tomb of Khán Bahádur, at Begumpura, only prove how architectural taste fell with the fall of the Empire and became a mongrel style, half Muhammadan and half Hindu.

Lahore under the Sikhs.

Ranjít Singh, unlettered and unpolished as he was, was not without appreciation of architecture. Accordingly, he stripped the Muhammadan tombs of their marble facings and sent them to adorn the Sikh temple at Amritsar. He restored the Shálamár gardens, which had gone to ruin during troublous times of Ahmad Sháh, but at the same time laid ruthless hands upon the marble pavilions by the central reservoir, and substituted structures of brick and plaster in their stead. He turned the *sarái,* which separated the fort and palace from the Jama Masjid, into a private garden, and placed therein the marble edifice which remains to this day the architectural *chef-d'œuvre* of his reign an example of injudicious spoliation and hybrid design. Besides the above, a few unsightly temples to Siva, erected in honour of a favourite wife or dancing girl, and some tasteless additions to the fort, comprise all the architectural works of Ranjít Singh at Lahore. One of the latest specimens of Sikh architecture is the mausoleum of Ranjít Singh himself, his son and grandson. The building is, as usual, in design substantially Hindu overlaid with Muhammadan details, and does not bear close inspection; but the effect at a distance is not unpleasing. The palaces of the Sikh nobility show the same blending of Hindu and Muhammadan design, and are further disfigured by small angular chambers perched on the highest part of the building, to catch the breeze in the hot weather and rains. The walls of the chambers are gaudily but roughly painted with scenes sometimes of a religious, some-

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times of a warlike or sporting character. The former are generally taken from the life of Krishna or of Bába Nának; the fighting scenes relate chiefly to conflicts with the Afgháns of the north-west frontier, but none are remarkable as works of art.

Action taken in recent years for the conservation of the leading ancient monuments.

Of recent years the Archæological Department has undertaken the conservation of ancient monuments, and amongst the measures taken the following are the most important:- The military barracks long used by the British Government have been removed from the *Díwán-i-'Am* of Sháhjahán in the Fort of Lahore; modern walls and other excrescences have been demolished: the plinth has been exposed to view and the throne and chamber behind opened up. It still remains to grass the platform in front of the hall and to make good as much as possible of the damage that has been done in the hall itself. Of the buildings around the quadrangle of Jahángír all modern additions have heen removed from the one which did duty as a Roman Catholic Chapel and the *Bari Khwálgáh* has been repaired in order to utilise it as an armoury in place of the narrow and confined armoury opposite the *Shíshmahal*. The *Choti Khwábgáh* of Sháhjahán has been converted from its use as an English Church, its modern Gothic roof and other fittings removed, the ancient marble cornice and ceilings rebuilt and the whole in other ways restored in its previous form. From the *Moti Masjid* the treasury has been removed and the modern brick walls swept away. There was a vast rent in the ceiling of the *Shíshmahal* which necessitated the removal of the whole of the heavy roof in order to renew the timbers to which the ceiling was attached; after the timbers had been renewed a new roof was put over them and the ceiling itself carefully and skilfully repaired. The *Hazúri Bagh* garden has been entirely excavated, the old water channels and fountains repaired and the garden laid out as far as possible on its original lines. Numerous measures were carried out a few years ago with a view to securing the enamelled tile work on the walls of Wazír Khán's mosque and structurally strengthening the building, many parts of which were in a perilous state. The Railway offices were removed from the Railway Mosque, recent additions were demolished and the buildings generally conserved. At the Tomb of Jahángír at Sháhdara the minarets were repaired and partly rebuilt after the Dharmsála earthquake. The stone paving on the roof and platform was largely renewed and the *jáli* balustrade restored on one side of the tomb; much of the inlay work on the tomb itself has also been repaired; in the garden of this tomb and in the adjoining *sarái* jungle has been cleared, lawns and parterres laid down, and

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Action taken in recent years for the conservation of the leading ancient monuments.

old causeways and channels restored. Measures have been taken to preserve the fabric of the Tomb of Núr Jahán, which is largely ruined, and to lay out the surroundings. The Shálamár garden has been much improved by the removal of jungle, the laying out of parterres and the restoration of the water-ways and causeways.

Section C.—Population.

Density and distribution of population.

(*a*) Table 6 of Volume B gives separate statistics based on the census of 1911 not only of the density of the population of the district but also for the distribution of population over towns and villages by sex and among occupied houses for each *tahsil* as well as for the whole district.

Taking the figures of the 1911 census report, the Lahore district is exceeded in population by one Native State only and in density by seven British Districts (including Delhi) and three Native States. The density of each *tahsil* is shown in the following table :—

Tahsil	Population per square mile.	Rural population per cultivated square mile.
Lahore ...	638	476
Chúnián ...	240	347
Kasúr ..	356	398

The density of Lahore itself is 7,816 per square mile, which is only about half that of Delhi and Amritsar, and a good deal less than Ráwalpindi and Multán. This is due to the existence of a large civil station. The intramural area is as congested as that of any of the other cities.

Towns and villages.

(*b*) Table 7 gives figures for six towns of the Lahore district—Lahore in the Lahore *tahsil*, Chúnián and Khudián in the Chú-

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nián *tahsil*, and Kasúr, Patti and Khem Karan in the Kasúr *tahsil*. It will be seen that Lahore and Kasúr are steadily increasing in population, Chúnián decreasing and the remainder remaining fairly constant.

A detailed account of Lahore city and other places of interest will be found in Chapter IV, and the following is merely a brief account of the minor towns:—

Kasúr, the head-quarters of a sub-division of the same name, stands just off the grand trunk road from Lahore to Ferozepore, 34 miles distant from the former and 16 from the latter. The town actually consists of a collection of fortified hamlets or *kots*, small in themselves, but forming a considerable town. Since 1867 Kasúr has been a municipality. Its history up to 1807 has been related above; since then the town has declined in importance and is now little more than the centre of a local trade in country produce. It also has a considerable reputation for the manufacture of leather, and a school of industrial art was founded there in 1876, and revived in 1914. Kasúr is on the line of railway from Lahore to Ferozepore, and is the junction for the branch to Lodhran and Amritsar. Chúnián (38 miles from Lahore) is the head-quarters of a *tahsil*, and the centre of local traffic in wheat, gram and cotton. It was constituted a Municipality in 1866. Khudián lies about 16 miles east of Chúnián. At Khudián the Katora Canal breaks up into three large distributaries which irrigate the Chúnián Hithár. The staple occupation is agriculture. Khudián was created a Municipality in 1874, but is now only a Notified Area. Patti is 38 miles south-east of Lahore and 28 miles east of Kasúr. It stands on the road to Harike Ferry, formerly the main line of communication between Lahore and Ferozepore. The population is principally Moghal, and largely agriculturist. Patti became a Municipality in 1874, but since 1912-13 has only been a Notified Area. Khem Karan lies in the Manjha tract of the Kasúr *tahsil*, and is distant 7 miles from Kasúr along a metalled road. The Municipality dates from 1869. Lahore Cantonment has since 1906 been the name given to Mián Mír, the head-quarters of the 3rd or Lahore Division of the Northern Command. It is situated three miles east of the Civil Station of Lahore. A more detailed account will be found in Chapter IV.

Number of villages.

Besides these towns the district contains 1,194 villages, two of which Pádhána and Pattoke are Notified Areas. They contain a rural population of 758,826 souls. Some 13,000 persons are described in the census tables as living in encampments, boats and large fairs, or as belonging to the unclassed railway population.

The percentage of the whole population living in the villages is 73·23; the average rural population living in each village is 636, and the number of villages per 100 square miles is 42. The number of persons living in each occupied house in the villages is 4·9 and in the towns 5·9.

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Population.

Number of villages.

For census purposes a village was described as any area for which a separate record of rights has been made, or which has been separately assessed to land revenue, or would have been so assessed if the land revenue had not been released, compounded for or redeemed, or which the Local Government may, by general rule or special order, declare to be an estate.

Character of the villages.

The villages in this district fall into the two "Indo Gangetic plain" types described in paragraph 28 of the Census Report of 1911, the 'old' and the 'new.' In the older Jat villages of the Mánjha it will be generally found on close inspection that the houses are divided off in some sort of order according to the *pattis*, *tarafs*, or other internal sub-divisions observed in the village constitution. Whatever purpose they serve, in the Sandhu villages of the uplands they are nearly always flanked by high walls. The lowland villages are as a rule more cramped than those in the Manjha, and less attention is paid to order and method in laying out the settlement. The lowland houses, too, are smaller. In Lahore itself the grouping of houses varies with their position. Within the city walls they are nearly all built wall to wall and back to back, and 558 acres is made to bear 20,691 houses, giving an average of ·027 acre for each house. If, however, the Civil Station is taken in, each house covers an average of ·36 acre, and if Cantonments are added, of ·42 acre.

Grouping of houses, etc.

(c) The variation per cent. of the population of the district is as follows:—

Growth of population.

Period.	Lahore District.	Whole Province.
1881—1891	+16·4	+10·1
1891—1901	+8·1	+8·2
1901—1911	−10·8	−2·2

The actual figures for population are—

1881	... 924,106	1901	... 1,162,109
1891	... 1,075,379	1911	... 1,036,158

The decrease of the last decade was general in the province, amounting to 2 per cent. of the population. The general decrease is attributed in the Census Report to plague and fevers, but the decrease for the Lahore District is largely accountable to the transference of the Sharaqpur *tahsil*.

CHAPTER I.—C.

Population.

Migration.

(*d*) The figures for migration will be found in Table 8. The most noticeable feature is perhaps the very large number of immigrants from the Amritsar District. After Amritsar the districts which give most persons to Lahore, are naturally those adjacent to it, that is to say, Siálkot, Gujránwála, Ferozepore and Montgomery. The same districts with the addition of Multán take most persons away from Lahore, but owing to its metropolitan character in nearly every case Lahore takes more than it gives. The exceptions to this rule are Multán and Montgomery and the Baháwalpur State. The total number of emigrants from the Lahore District to the Chenab Colony is 28,176 of whom 15,676 (55·6 per cent.) are males. The Census Report gives no figures for emigrants from Lahore to the Jhelum Colony.

The figures given in Table 8 for the *tahsíls* naturally give an enormous preponderance of immigrants into the headquarters *tahsíl*, and the last Census Report shows that the immigration into Lahore city itself is very large, 436 *per mille* of the inhabitants being born outside the district. The chief classes of immigrants are railway employés, domestic and Government servants. Immigration has been increased by the strengthening of the headquarter offices of Government, the transference to Lahore of the Military Accounts Department and of the headquarters of certain departments, the growth of Railway Workshops, and the establishment of new educational and other institutions. The nature of the immigration has led to a preponderance of males, and the proportion in the city is only 596 females per thousand males.

Age statistics.

(*e*) Statistics relating to age, sex and civil condition arranged by religion are provided by Table 10. Pandit Hari Kishan Kaul, R. B., C.I.E., discusses the reliability of these figures in his Census Report for 1911, and the general conclusion of his article is that the figures should not be considered too trustworthy. The one feature of these which seems to call for comment is the apparent unpopularity of early marriages in the Lahore District, as shown in the following table :—

——	PROPORTION OF MARRIED TO UNMARRIED CHILDREN	
	(*a*) for the whole of the British Punjab.	(*b*) for Lahore District.
Children under 15 ...	1 in 16	1 in 24
" " 10 ...	1 in 66	1 in 220
" " 5 ...	1 in 1,315	1 in 11,000

CHAPTER I.—C. Population.

The proportion of married women between the ages of 15 and 40 who had migrated to the Canal Colonies was 38 *per mille* in 1891, 35 *per mille* in 1901, and 34 *per mille* in 1911.

Age statistics.

The following table shows the variation per cent. in population of the district at certain age-periods for the last three decades :—

1		2	3	4	5	6	7
Decade.		All ages.	0—10	10—15	15—40	40—60	Over 60
1881—1891	...	+16·4	+38·5	−4·1	+25·0	−6·6	−40·0
1891—1901	...	−8·1	−8·1	+36·6	+1·7	+26·1	+104·0
1901—1911	...	−10·8	−11·8	−21·5	−7·2	−9·6	−13·0

Vital statistics.

(*f*) The system in vogue in British districts for the collection of vital statistics is described on pages 56 and 57 of Part I of the Census Report for 1911.

Table 11 gives the figures for births and deaths in the Lahore District for each year since 1901 and for three quinquennia previous to that, as well as the actual number of deaths during the same periods from cholera, fevers, small-pox and plague. It will be noticed that the general birth-rate has never been higher than it was in 1914 (the latest year for which figures are available) and the death-rate has only twice been lower, at any rate since 1885.

The mean birth and death rates for the Lahore District as compared with the provincial averages for the year 1914 and for the preceding quinquennium are as follows :—

	Births.		Deaths.	
	1914	Mean ratio of preceding five years.	1914.	Mean ratio of preceding five years.
Province	46·3	42·8	32·0	31·1
Lahore	50·2	44·6	29·0	30·9

The number of males born in 1914 to every 100 females was 109·4 for Lahore and 109·7 for the province : the excess of births over deaths for every 1,000 of the population was 21·2 for Lahore and 14·3 for the province.

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Vital statistics. Diseases.

Table 13 gives the actual deaths and births for each year in the six chief towns of the district—Lahore, Chúnián, Khudián, Kasúr, Khem Karan and Patti.

(*g*) Table 12 gives the monthly deaths (*a*) from all causes, (*b*) from fevers.

The following figures show the average deaths from fevers in each month for the decade 1905—1914 in the district :—

Month.	Average number of deaths from fevers.
November	2,609*
October	2,486*
December	2,315*
January	1,689
June	1,593
September	1,541
May	1,493
July	1,338
August	1,314
March	1,288
February	1,282
April	1,208

*NOTE.—It will be seen from Table 12 that these three months showed an abnormal number of deaths from fever in 1908, but even if allowance is made for this they still head the list.

The annual figures for cholera, small-pox and plague are to be found in Table 11, and for infirmities in Table 14. There are no figures for plague mortality before 1901.

Measures taken to cope with fevers.

The chief method of fighting fevers in this district is the distribution on a large scale of quinine. In 1914, the Lahore District Board distributed 22,440 five-grain tablets, 1,925 two-grain tablets, and 9½ lbs of powder. The municipality distributed 98 lbs. of powder. Khem Karn and Kasúr Municipalities also distributed quinine.

CHAPTER I.—C. Population. Measures taken to cope with plague.

Plague is combated by a special staff of Assistant Surgeons, who tour amongst the villages educating the inhabitants, and introducing to them the best methods of eradicating the scourge. The chief anti-plague methods recently adopted in Lahore have been trapping, baiting and smoking out of the rats. Trapping is the favourite method with the villagers partly because traps are easy to work, and partly because it does not necessitate their absence from the fields. However its efficacy is by no means uniform; at times it has been successful, at others its results have been discouraging. Baiting is not liked by the *zamindar*, chiefly through his fear that some of the cattle may possibly eat a stray bait and die. However particular care is always used in this method, wherever cattle are kept, and as far as possible all unused baits are picked up. Smoking was newly introduced in 1915. It was first carried out by means of smoke stoves, but afterwards by the use of Lane's *nim battis*, which have been found to be better for the purpose. A third method of smoking is by roof fumigators. The attitude of the people towards smoking differs widely. It can roughly be said that, the more popular and influential are the village headmen, the less resistance is offered. However as a general rule the villages do not object: all the opposition comes from a few recalcitrants. The enemies which plague operations and especially smoking have to vanquish are the ignorance and superstition of the village folk, their complete lack of co-operation and last but not least their extraordinary lack of interest in their own welfare.

Infirmities.

Table 14 deals with infirmities, and shows the number of insane and blind persons, deaf-mutes and lepers of both sexes.

The number afflicted per 100,000 of the population in the Lahore District is shown as follows:—

	Insane.		Deaf-mute.		Totally Blind.		Leprous.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
1881 ...	47	26	97	62	561	585	14	3
1891 ...	57	29	102	70	399	425	7	2
1901 ...	100	48	42	30	336	354	8	2
1911 ...	102	46	73	45	263	297	4	1

The inflated state of the insanity figures for Lahore is due to the existence in the district of the only Lunatic Asylum in the

CHAPTER. I.—C. — Population. — Infirmities.

province. A note to subsidiary Table I of Chapter X of the Census Report explains that after deducting from the total number of inmates of the Lahore asylum those born outside the district the corrected proportion for 1911 will be:—

Males	...	...	37 per 100,000
Females	...	...	45 per 100,000

Deaf-mutism has increased in the district during the last decade to an extent only exceeded by Ambála, Gurdáspur and Siálkot, but compared with 1891 and 1881 there is an improvement. On the other hand blindness has decreased, and only Ludhiána, Amritsar and Hoshiárpur show a more marked falling off. As far as Lahore is concerned the improvement is attributed by the Census Report to the existence of the Mayo Hospital. It will be seen that leprosy is also decreasing in the district.

Infant mortality.

(*h*) The following statement gives the infant mortality in the Lahore District during the last three years:—

YEAR.	UNDER ONE YEAR.		ONE YEAR AND UNDER FIVE YEARS.		TOTAL.
	Males.	Females.	Males.	Females.	
1913	5,619	5,209	4,781	4,289	19,898
1914	5,222	4,909	3,653	3,348	17,132
1915	4,990	4,424	3,603	3,353	16,370

There is a gratifying decrease to be seen in the total number of deaths, but even so the proportion is enormous, and much remains to be done in this direction. In 1914, 51,071 births were registered and 10,131 children under one year of age died.

Mortality is due to a great extent to dirt and poverty, the general conditions of life of women living behind the curtain, bad housing and clothing, want of fresh air, and dark rooms. Moreover, as girls are not so much valued as boys, less care is taken of them, and their death-rate is proportionately greater. In Lahore itself a good deal has been done by the Society for Propagating Scientific Knowledge to curtail the evil. Classes are held in mothercraft and home-nursing, and lectures in hygienics and kindred subjects, and much is being done to break down the barriers of ignorance and superstition.

Birth customs.

The birth of a boy is an occasion for great rejoicing; a girl causes less enthusiasm. Amongst the Muhammadans presents

are given to the relations, and sweets distributed. Rings are put in the child's ears and nose and silver ringlets round the throat. Amongst the educated class prayers are recited in the child's ear. For seven days the relations are feasted; one goat is slain for a girl, two for a boy. Amongst the Hindus and Sikhs the mother and child are considered unclean. A nurse is brought and the baby washed in hot water, and with its mother is kept apart for 13 days, whilst the room is carefully guarded against the entrance of unclean things. On the 13th day, after a Brahman has done *púja*, the mother and child are thought clean, and the relations are given a feast. Rich men distribute jewellery, and the relations also contribute presents to the child. On the 40th day the mother and child are again cleansed and the mother is allowed to go out of doors.

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Birth customs.

(*i*) Sex statistics are to be found in Table 10. The following figures will show the proportion of females in the district to each thousand males for the last four decades compared with the figures (*a*) for the province, (*b*) for the district and States of the "Indo-Gangetic Plain West":—

Sex statistics.

	1881.	1891.	1901.	1911.
(*a*) Province	844	850	854	817
(*b*) Indo-Gangetic Plain West	836	839	842	795
(*c*) Lahore District	811	816	815	741

It will be seen that there has been an alarming fall in the proportion in the last decade, which is general all over the province, especially in those districts which fall into the same natural area as Lahore. But in no district or State in the whole province is the proportion for 1911 lower than in Lahore. Table 11 also shows that in every year the female birth-rate has been lower, and the female death-rate higher than that of the males. The reason for this disparity is partly to be found in the excessive female mortality from plague and fevers, but the whole question is carefully discussed in the Census Report for 1911.

(*j*) The statistics of civil condition are given in Table 10. The following remarks about marriage and wedding customs are taken from the District Gazetteer of 1893-94.

Civil condition.

Marriages in the city are preceded by betrothals, generally contracted during infancy; in well-to-do families a boy is not usually allowed to remain unbetrothed after four or five years of

Betrothal and marriage.

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Population.

Betrothal and marriage.

age. The women of the two families arrange the match, and the men agree to whatever they propose. Often the males of the contracting families never even meet before the wedding takes place. Among Hindus intermarriage is greatly restricted by the caste rules. People of the Brahman, Khatri, Vesh or Sudra castes never intermarry from one caste into another, and within each caste there is much social grading which must be strictly observed in contracting marriage ties, nor again may people intermarry within their father's or mother's tribal sect. A betrothal, when finally arranged, is announced to the brotherhood and presents of sweets and cash to the value of Rs. 25 to Rs. 200, according to means, pass from the girl's parents to the boy's family. Marriages in Lahore are generally arranged between families living in the city, and foreign blood is seldom introduced.

People in the city are beginning to understand the evils of child marriage and if possible find a boy of maturer years for their daughters; but as most of the boys are betrothed at four or five years at present, no husband of mature years is available, except a widower. Among these a school boy commands a higher price than an illiterate, a collegiate than a school boy, and a man in Government employ higher than any. For any young man in his teens who has lost his wife there is the keenest competition, the presents or dowry offered rising in value by a process very like that of bidding at an auction. The dowry of course is nominally settled on the girl, but the husband gets it all on her death. Some young men have made large fortunes by the successive deaths of three or four rich young brides one after another. One of the chief reasons why education commands so high a price in the matrimonial market is that educated men when grown up see that their young wives are treated much better than uneducated families are likely to do.

Among Muhammadans the marriage is performed by a *Maulvi* or *Mullah*, who reads the *nikáh* or marriage service. Among Hindus the marriage ceremony is performed as follows:—seven bamboo stakes are put up in an open ground fenced by red strings, to which green leaves of different trees are fastened. Inside this enclosure two reed seats covered over with a red cloth are placed for the bride and the bridegroom. In front sit the family priests of either parties making figures of the god Ganesh and other goddesses, and reciting verses in their praise. The priest of the bride's family makes the young couple go through a ceremony of worshipping the heavenly bodies and then recites from the Shastras certain verses which mean an assertion on the part of the bride's parents that they give up their daughter; after that

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he takes the bride's hand and putting it into the bridegroom's, makes him repeat a verse signifying his assent to the union. This is called *hathleva*. A fire is then kindled; round which the bride and bridegroom have to walk four times; this is called *láwan*; the fire is supposed to be a witness of the ceremony, as fire is looked upon as a deity. Presents consisting of valuable jewellery, cash, dresses, almost all kinds of furniture, sweets and animals (a cow, mare, &c.), are then gifted by the bride's parents to the bridegroom. The marriage is then complete.

Expensiveness of marriages.

Marriages among Brahmans and the upper classes of Khatris of Lahore city are singularly free from the extravagant feasting and noisy celebration which are so prominent in most Indian marriages, but their expenditure on presents is very heavy. A marriage costs the parents of either the boy or girl, anything from Rs. 200 to Rs. 4,000. The bridegroom or his father gets the benefit. Practically among all classes the expense attendant on betrothals and marriage is very heavy: so much feeding and entertainment have to be done for relations by both the boy's and girl's family and for *fakírs* and menials. Rajput marriages are especially extravagant.

Widow re-marriages.

Widow re-marriages, are little known in the city. Hindus regard them as forbidden by their religion, and Muhammadans seem to follow suit. Reform in this respect has been much talked of, but few of the reformers have ventured to set the example.

Marriage in villages.

The betrothals which always precede marriages are usually effected in villages at any age between 9 and 12 years old. The girls should not be older than 9. Girls must be married, if possible, in villages as in the city; with the boys of agriculturists it is merely a question of preference or of means to support a wife. Thus the first proposals come from the girl's parents through a go-between, usually a Brahman or the village barber. If the parents of the boy selected send a favourable reply, then the girl's people in a few days send tokens to the boy's house, a few dates usually or other trifles of the sort; these are offered to the boy's parents in the presence of relatives and if accepted they form an outward and visible sign of the conclusion of the betrothal. In villages the dowry given to a girl by her parents is very insignificant as a rule, except when the boy is of a higher social status than the girl, when the latter's parents have to make presents accordingly. Otherwise among the Jats so far from the girl's parents giving anything there is a custom, partly clandestine, partly recognised, under which money, varying in amount from Rs. 50 to Rs. 200, is paid for the girl to her parents. The

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Population.

Marriage in villages.

wedding may take place any time after the betrothal, but often does not for several years. The time of marriage rests with the girl's father or guardian who of course is guided by his own and the girl's convenience. Eventually, after consulting the Brahmans, he fixes on a day and sends intimation to the boy's parents who are bound in honour to accept it. Very soon after they send the girl presents of clothes and jewellery. A day or so before the wedding day the relatives on the boy's side assemble and proceed in procession to the girl's house where the marriage ceremony is performed in the manner described above for city marriages.

When the ceremony is complete then alms are distributed to *fakírs* and other beggars; all present, including village menials, are fed, and the bride is put into a *doli* or hand car and carried off to the boy's house. She stays there a couple of days and then returns to her father's house. How long she is detained there is a matter of arrangement between the pair themselves; the bride's father probably wishes to keep his daughter, as she is useful about the house, but she may not stay away over the year without her husband's leave. The final bringing home of the bride is called *mukláwa*.

Restrictions on inter-marriage.

These are the same in this district as elsewhere. Inter-marriage between people of different tribes is unlawful: on the other hand marriage between two of the same section of Jats is not countenanced. The Jat must select a woman of a different section from those to which his father or mother belonged and one too who lives at some distance from his village. Muhammadans other than Jats do not appear to observe this rule.

Marriage within the 6th degree of blood relationship is unlawful; or between members of different religions, but for this purpose no difference is made between a Hindu woman or one of a Sikh family.

Marriage of widows.

Re-marriage of widows is common among the Jats and is recognized in villages among all tribes, except perhaps some Muhammadans of high social standing. Among Jats a widow is bound to marry one of her deceased husband's collaterals who will succeed to the property on her death. Such a marriage would be made by the simple form of *chadar-dáli* or sheet throwing. If for any reason she cannot, or will not, marry one of the collaterals, and wants to marry elsewhere, she is generally at liberty to do so, provided she abandons her claim on her deceased husband's property and lives far away from his relations. A marriage of a widow with a man outside the circle of her husband's relations is performed by the ceremony known as *karewa*, which is little more than the fact of the man and woman living together

CHAPTER I.—C. Population. Language.

(*k*) The prevailing dialect of the district is Punjabi which is spoken by 970,059 out of the total population of 1,036,158. Urdu is the next in importance being spoken by 37,555 persons. Hindustani is spoken by 6,725, English by 5,909, Pashtu by 4,919 and Hindi dialects other than Urdu and Hindustani by 4,184 persons. Other dialects and languages are spoken as follows :—

Vernaculars of the Punjab ...	Lahnda	420
	Western Pahari ...	159
	Rajasthani	2,279
	Baloch	3
Indian Vernaculars ...	Sindhi	482
	Eastern Pahari ...	24
	Kashmiri	706
	Unclassed Gipsy Languages	850
	Bengali	475
	Gujrati	279
	Other Indian Vernaculars	91
Asiatic Vernaculars ...	Persian	992
	Chinese	5
	Arabic	17
	Other Asiatic Vernaculars	7
European Languages ...	Portuguese	2
	German	7
	French	9
	Other European Languages	11

Out of those that speak Punjabi, 969,600 speak the Standard Punjabi of the Manjha, which is probably the purest form of the language that exists, and the remaining 389 speak Dogri.

In the city of Lahore the enumeration was to some extent prejudiced by the Urdu-Hindi-Punjabi controversy, but stringent precautions were taken to combat this and, in the words of the Census Report, the extent of the error was insignificant on the whole. The present figures for the city of Lahore with reference to the languages which were the subject of the controversy are as follows :—

		Hindustani.	Hindi.	Urdu.	Punjabi.
Hindus ...	Males	510	2,288	5,561	40,091
	Females	174	702	3,427	21,794
Sikhs ...	Males	...	115	292	8,600
	Females	...	78	192	3,500
Muhammadans	Males	1,328	219	14,474	59,252
	Females	872	131	9,401	39,854

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Population.

Races, tribes, castes, etc.

(*l*) Table No. 15 gives the figures for the principal castes and tribes of the district, with supplements for the various sub-divisions of Jats and Rajputs. Many of the tribes in the Lahore District are to be found all over the Punjab, and therefore it will be sufficient here to give a brief account of the most important of them only. Those which have been gazetted under the Land Alienation Act will be found marked with an A in Table 15.

The Jats.

The Jats are not only numerically the strongest tribe, but in many respects the most important. In 1911 they numbered 162,778, the distribution by religion being Hindus 3,916, Sikhs 98,241, Muhammadans 60,621. Their distribution by *tahsíls* is shown in Table 15. The Sikh Jats are a far more important section of the tribe than their mere numbers would lead one to think. Though the rules of conduct as laid down by Guru Gobind Singh are not observed so strictly as formerly, Sikhism still retains in part the prestige of the military organisation which made it the power it was in the Punjab in the time of Ranjit Singh. The marauding instincts instilled into the minds of his followers by Har Gobind, the fighting habits fostered in the race by the sword rule of Ranjit Singh, and the constant faction broils that prevailed between the separate units of the Maharaja's military following when not engaged against a common foe reveal themselves continually in the every day life of the Sikh Jat of the present day, in his grasping rapacity and in his readiness to take up arms in defence of what he considers his rights. From an agricultural point of view the distinction of religion is important, because the rules of conduct at present observed by the Sikhs are much better adapted to the necessities of a cultivating life than the habits of Muhammadans at least, if not of Hindus. Chief among these is the rule prohibiting smoking; the Muhammadan and to a less extent the Hindu wastes his time, dulls his faculties, and to some extent predisposes himself to luxuriousness and indolence by excessive smoking. The immunity of the true Singh Sikh from this habit undoubtedly makes him a more efficient agriculturist as a rule than his brother Jat of any other religion. Similarly being somewhat lax in his religious observance he has much more liberty as regards his times for going to and stopping at his work in the fields than the Muhammadan Jat, who though he may not carry out strictly the prescribed ritual prayers five times a day must conform more or less to the custom of his co-religionists. On the other hand the Muhammadan and Hindu Jats are much less addicted, openly at least, to the vice of drinking, which is sanctioned by the Sikh religion, and which incapacitates many a Sikh

cultivator for the steady perseverance in cultivation and quiet domesticity of life to which the ordinary Jat in the absence of disquieting circumstances appears to be naturally inclined. This is sufficient mention of the distinctions in Jat character that appear to be based on differences in religion. Next come those found to accompany difference in locality of habitation. In physique, intelligence, and general strength of character without doubt far the finest specimens of the Jat tribe are to be found in Mánjha, and among the Mánjha Jats the *Sandhús* in all respects rank first. It was from these that most of Mahárája Ranjít Singh's military leaders were drawn ; and indications of the wealth and power to which they then rose are to be found in the large masonry houses belonging to ancient Sikh Sardár families, which still stand in many of the Mánjha villages though for the most part in bad repair. Before and during the Sikh rule all the Jats of the Lahore Mánjha formed an important contribution to the Imperial army, but after the general disbandment that followed the extension of British rule over the Punjab they appear to have returned to their villages and taken kindly to an independent rustic life, supporting themselves partly by means of a carrying trade which brought in considerable profits before the expansion of our railway system and partly by the precarious fruits of a cultivation which was then almost entirely dependent on an uncertain rainfall, canal irrigation not yet having been extended to the Bári Doáb tract. Of late years the attractions of farming rendered easy by the new resource of canal water and general abundance of land have proved superior to the prospects held forth in Government service, whether military or police, so far as the Mánjha Jats generally are concerned. This is the more remarkable as in the adjoining district of Amritsar the *Sandhús* have taken largely to service in the army and in the military police. In the Lahore District the sons seeing their fathers for the most part preferring an agricultural life have followed suit and stayed at home.

As an agriculturist the Mánjha Jat is only moderately good. Hitherto their farming has been conducted on broad and rough principles ; they have had large areas to deal with, which until within the last few years were dependent mainly on dry cultivation, and this was dependent for its success far more on the season than on any special efforts on the cultivator's part. The canal extension even has hitherto made little difference in the character of the farming ; the Mánjha Jats still have plenty of land, which under irrigation gives excellent produce in return for every little trouble on the cultivator's part. In the more congested parts however of this canal-irrigated

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The Jats.

tract, on the north for instance, towards the Amritsar border, where population is beginning to press on the soil and the land in places shows signs of exhaustion, the people are coming to understand that to make their land yield continuously something more is required than a sowing preceded by two or three ploughings and followed by copious canal irrigation.

Socially the Mánjha Jat's character is often open to reproach. The majority of them drink, and many of them drink to great excess : a considerable number of Mánjha Jat villages have obtained an unenviable notoriety for the numerous bad characters, thieves and highway robbers they shelter. Murders and murderous assault in the Mánjha occupy far too prominent a place in the criminal records and appear to be increasing steadily as the Jats grow rich and riotous on the proceeds of their newly-irrigated lands. They are generally reputed to be deficient in chastity. This might be more truly said of the women than of the men. It is not often that the village life is disturbed by any serious scandal of immorality. The fact that a Jat who has a woman of his own section outside his family to live with him incurs the general opprobrium of the brotherhood, and, also the custom whereby a Jat usually takes to wife the widow of his deceased brother by the simple ceremony of *chadar dáli* or throwing of the sheet no doubt both act as a check on immoral tendencies. In their dealings with one another the Mánjha Jats often exhibit excessive greed and intemperate cruelty. In their villages they are democratic by inclination and impatient of control by those they do not fear, but to the Government officer paying them a friendly visit, especially to the Englishman, they are frank and conciliatory without losing their outspokenness and customary independence of manner. Taken all round, notwithstanding his numerous faults, the Mánjha Jat is a fine fellow with great capacities for good under careful guidance. Though naturally restive and resentful as individuals under injury done and always extraordinarily tenacious of their purpose, yet as a body they are quietly disposed in the absence of disturbing elements and easily led. Whether as peasants or soldiers they yield readily to firm discipline, provided it is accompanied with justice and fair dealing. Both in their faults and in their virtues, *Sandhús* are the most prominent among the Mánjha Jats as they are the most striking in their external appearance, the features becoming handsomer and more decidedly marked the older the *Sandhú* grows.

Hithár Jats.

In the Hithár of the Sutlej Beás nearly all the Jats are *Sidhu*. The *Sidhu* Jats occupy principally the western half of

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the Hithár, which forms the southern portion of the Chúnián *tahsíl*. They came here probably from the Ferozepore District on the opposite side of the river. An account of the *Sidhú's* migration in this direction is furnished on page 59 of the Ferozepore Gazetteer for 1888-89. The *Sidhu* is a far more peaceable, well-behaved, and industrious member of society than his *Sandhu* brother. Having lived for many generations on the meagre profits derived from cultivation dependent on a precarious rainfall and a slow and expensive process of well irrigation by the Persian wheel, the *Sidhu* Jat has gradually become accustomed to regard the cultivation of his land and constant attendance at his well as the chief if not the sole reason for his existence ; he has little money and little time to spend on luxuries or on amusements. He is a thrifty hard-working peasant cultivator, who prefers to regard farming as a pleasure as well as a means of subsistence, and will not therefore bother himself with the more ignoble and laborious market-garden style in which the Arain delights. In enterprise, pluck and perserverance under adversity the *Sidhu* Jat, is immeasurably the superior of the Arain. He is the true "zamíndár" or "husbandman" of the Province, and his women and children assist him all they can.

Jats of the Ravi villages.

The Jats along the Rávi are principally *Sandhús* who have some large settlements along the lower course of the river through this district, mostly in the Chúnián *tahsíl*.

The above account indicates sufficiently the locality and features of such sections of the Jats as are most prominent in different parts of the district. Other principal sections are described below.

Bhullar Jats.

The *Bhullar* Jats occupy a few large estates in the centre of the Kasúr Mánjha. They in common with the *Her* and *Mán* Jat sections, who also are found in a very few scattered villages of Lahore District, call themselves the *asl* or original Jats and are said to have sprung from the *Jat* or matted hair of Mahádeo, whose title is Bhúla Mahádeo. In character the *Bhullars* resemble the *Sandhús*, but are inferior in physique.

Gil Jats.

There are several *Gil* Jat settlements near the Sutlej in Kasúr *tahsíl*, a few in the Mánjha of Lahore *tahsíl*, and three or four on the Rávi in the Chúnián *tahsíl*. They are principally Sikhs, but they have not a good reputation in this district as cultivators, and are said to be ill-suited for the toil and risks of cultivation by well irrigation, on which they are largely dependent in the tracts where they happen to be settled. This is possibly owing to their having long been used to the luxuries of river inundation, which now neither on the Rávi nor Sutlej is as good

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as it used to be. They give one the impression of being both querulous and quarrelsome. In physique they are inferior to the ordinary Mánjha Jat.

Gil Jats. Dhillons.

The *Dhillon* settlements are few and scattered over the whole district, chiefly in the Mánjha. Their largest village is that of Bhasín on the Amritsar border near the Rávi. There are many other miscellaneous sections of Jats scattered about the district, but further detailed mention of them does not seem required.

Aráins.

The next most numerous tribes to the Jats are Aráins, who are settled mostly along either bank of the Rávi at the upper half of its course through the district; as usual they lie thickest near the town of Lahore. Like elsewhere, so here the Aráin is a humble minded peaceable creature, without a thought almost except for his land; this he works up to a high pitch of cultivation by tillage and manuring. The Aráins' land holdings in this district generally originated in individual occupation of as much land as was then needed to support the squatter and his family; thus no surplus waste land would be included; now their families have increased, sub-division has continued generation after generation, and the average property of most households has been reduced until it is quite insufficient to support his family, notwithstanding the proverbial capacity of the Aráin to make soil yield double as much as it will under another's management. Partly owing to the pressure of population on the land and partly in consequence of extravagant habits induced either by the example of others or by exaggerated ideas of the value of his land, the Aráin near Lahore has become deeply involved in debt and has had either to sell much of his land outright or to mortgage it for a price he can never make good or on terms he can never fulfil. A similar condition of indebtedness, though on a less scale and of consequent depression of agriculture, is found in some of the smaller Aráin villages in the Sutlej Hithár, notably in the Kasúr *tahsíl;* there however the Aráin labours under difficulties, as manure, the one thing absolutely necessary to enable Aráins to carry on with any success their market garden style of farming, is not procurable in sufficient quantity. On the other hand in two or three large Aráin villages of the Kasúr Hithár, the very best cultivation of the ordinary crops such as wheat and maize is to be seen, and the people themselves are thriving and not much in debt. Generally speaking however the Arain is inferior to the Jat as a peasant cultivator and as a revenue-payer. Though exceedingly industrious and painstaking, he lacks perseverance; he succumbs to adverse conditions easily; debt specially appears to cripple him

CHAPTER I.—C. Population. Aráins.

more than it does the Jat. He has no notion of keeping his home neat, clean or comfortable, Aráin villages are proverbially filthy and untidy, his women folk are not to be compared with the Jat housewives for attention to domestic details or for economical management of their resources. There are very few Hindu and Sikh Arain villages scattered about, the people of which claim to be called and regarded as Jats.

Rájpúts.

The Rájpúts are the next most important agriculturist tribe in the district. They are practically all Musalmáns; no village is owned by any people who call themselves Rájpúts and at the same time profess the Hindu religion. The predominant section in this district is that of Bhatti Rájpúts, who number over 20,000 souls or about two-fifths of the total Rájpút recorded population. Next to Bhattís are the Khokhars, who number 8,399 according to the recent census, Chauháns 3,668, Puniár 2,009. Other clans of Rájpúts in this district are very insignificant in numbers. The true Rájpút agriculturists are notorious for extravagance, idleness, and slack cultivation. In almost every Rájpút village the mass of the people are impoverished and encumbered with debt, though on the other hand there are generally one or two leading men in prosperous circumstances. In the north-west corner of the Kasúr *tahsíl* there are a few settlements of so-called Rájpúts who are as competent agriculturists as any Jats to be found in the Mánjha. One of the most important sub-divisions of the Rájpúts are the *Khokhars* who occupy a settlement along the bank of the Rávi, a little outside the Lahore city comprising 16 estates, of which Niázbeg is the largest. These all call themselves Rájpúts, ranking their section as fifth in order, and marrying women only of their own section or of the four above them. They are all luxuriously disposed and very extravagant, spending money wastefully on clothes, horses and marriages. They take no payment for their daughters nor do the parents of the girl have much expense, but the boy's parents spend anything from Rs. 500 to Rs. 2,000 on feasting the relations of either side, distribution of alms and dancing women. Also the *tambol* or marriage gifts to the boy's father are very extravagant among this class, and the jewellery given to the girl from the boy's people comes to a good round sum. Similarly at funerals this section is reckless in their expenditure. Thus it comes about that the Khokhar Rájpúts are generally overwhelmed with debt. They are also very inferior agriculturists, being too proud or indolent to do heavy manual work themselves. The *Khokhars* in the Chúnián *tahsíl* however are rather Jats than Rájpúts and do not appear to have the idle expensive habits of the *Khokhars* in Lahore and Sharaqpur.

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Dogars.

The Dogars are of importance only in the lowlands near the Sutlej. They are said to have come there from the neighbourhood of Pákpattan about 160 years ago. They are all Muhammadan by religion and call themselves converted descendants of the Chauháns of Delhi. They were always a wild and lawless race in the past having no settled habitations, and this to some extent is their character still. Their houses by the riverside are for the most part wattled structures which can be put together or taken to pieces with very little expenditure of time or trouble. The Dogar generally establishes himself near rivers partly from preference for the easy and inexpensive form of cultivation which natural river inundation enables him to carry on, partly also no doubt to have greater facilities for indulging himself in his favourite pastime of cattle stealing. Once the stolen animal can be brought across the river all trace of it from the other side is lost. The Dogars in this district keep up their name for indolence and bad cultivation almost better than they do for cattle thieving. In this latter respect they are exhibiting a slight improvement. Whether from their habitual laziness and inclination for opiates or from their extravagance and carelessness in which they strongly resemble the Rájpút, the majority of the Dogar villagers are very poor, but the community usually includes at least one highly respectable member who comes out to meet the Government official well mounted and expensively dressed.

Kambohs.

The Kambohs in this district are comparatively few. The large majority of their villages are situate in the Sutlej Hithár, principally in the Chúnián *tahsíl*. The Musalmán Kambohs are hardly distinguishable from Aráins and very probably are of the same stock; the Sikh Kamboh is better than either, being equal to the Aráin in industry, but more enterprising and more provident. He matches the Aráin in market gardening when necessary and is not inferior to the Sidhu Jat in general farming. He is however of smaller physique than the Jat and of much less intelligence. The Hindu Kambohs are seldom found in the depressed and debt crippled condition into which so many Aráin villages have sunk.

Gujjars.

The Gujjars in this district are nearly all Musalmán: their villages are for the most part in fair order, and the people are moderately industrious. They do not bear out the bad reputation that generally attaches to their class further down country; but they combine pasturing of cattle with agriculture to some extent.

Mahtams.

The Musalmán Mahtams seldom own any land, but make their living by catching wild game, chiefly pig, which they eat;

by odd jobs in the fields; by making ropes out of *sar* grass, cutting down jungle and clearing land for cultivation in inundated tracts. The Hindu and Sikh Mahtams own a few villages: their cultivation appears to be fairly good, but all Mahtams are looked on as a wild unreliable lot; they are quarrelsome and addicted to thieving when they get the chance.

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Mahtams.

Labánás.

Formerly this was the class from which the carriers of Upper India were drawn, and they plied their trade in former days on bullocks of which they kept large herds. Then they took to agriculture, not instead of trade but as an additional means of livelihood. Now, however, their carrying trade has been superseded by the railway, and they have settled down more or less to agriculture for which their hardy spirit, power of endurance and industry well suit them. In all their estates the pressure of population is more than the land can bear, and many of them go out to seek a living elsewhere. The Sikh Labánas, found principally along the Rávi bank, are far the best cultivators.

Moghals.

Of the Moghals far the larger number belong to the urban population: and the same may be said probably of the Sayads. As cultivators, they are no better than Qureshís, being lazy, thriftless and very hard on their tenants.

Trading classes—Khojahs.

The word Khojah is the same as the Arabic word Khwájah, meaning a man of wealth and respectability. In this district it is used to denote a Muhammadan trader as opposed to Khatrís and Arorás who are Hindu traders. They are not landowners in the proper sense, but in the course of their money lending transactions they have acquired a good many wells and odd plots of land, mostly on mortgage, but some in absolute transfer. They are chiefly noted for the severity of their money-lending terms.

When making advances of grain for food and seed they value such advances in cash at the dearest rates prevalent in the market during the year, and record the amount so estimated in their books: they claim as interest a *marla* (the twentieth part of a *kanál*) of produce to be delivered each harvest or twice a year. If produce is actually offered in discharge of interest or principal, its value is reckoned not at the high prices at which the advances were valued but at the lower rates prevailing after harvest. By such devices as these the Khojah on each advance he makes adds interest cent. for cent. on each year's outstandings: and practically the original loan may be quadrupled

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Khojahs.

in a couple of years if no payment or delivery of grain has been made in the meantime. The people fully recognize the iniquity of this class of transactions and constantly make a complaint on the subject, apparently regarding themselves as helpless victims: the Khojah is established in the village and manages to keep out other village traders: the villagers must have advances occasionally, and there is no one else to go to but the Khojah.

Khatris and Aroras.

The Khatris and Aroras live chiefly in towns but also are found in most villages as petty traders or money-lenders. Their terms of interest are more lenient than the Khojahs' and they are much more ready to take up a mortgage in security for a debt, and this is to the interest of agriculturists inasmuch as a debt secured by a land mortgage ceases to have interest added to it. Also, if there is anything over in favour of the mortgagee after making full allowance for the interest due, they will probably allow the mortgagor some reduction on the principal. Of the two classes, Khatrís and Arorás, the former has much the best position as a village trader and gets on better with the people. The Arorás have a larger proportion of Sikhs than the other, but in neither class are Sikhs numerous. The Khatri is far the more enterprising of the two and is much readier to take up land in permanent transfer by sale. Many Khatrís indeed in this district cultivate themselves.

Menial classes and village artizans—*Chuhrás.*

Numerically the *chuhrás* or scavengers are important, being in this respect third only to the Jats and Aráins, and numbering 982 *per mille* of the population. They fill also a prominent and necessary position in each village. In this district 70 per cent. are Hindus, 29 per cent. Muhammadans and 1 per cent. Sikhs. Some of the village *chuhrás* perform their hereditary duties of sweeping and scavenging for certain families, to whom they also render occasional assistance in field work by working at the manure, folding and feeding the cattle, or in busy seasons helping to drive the plough. This class also would carry messages from village to village, do all sorts of odd jobs which crop up on occasion, make the *chhaj* or winnowing pan and the *sirki* or grass thatch used to cover carts. For all these services he receives a share of all grain harvested by the houses which get his attentions. This share is on the average 5·1 per cent. of the gross produce. Besides this class, however, there are other *chuhrás* distinguished as *athri,* who confine themselves entirely to field labour and are the regular farm sweaters of the cultivators, their principal duties being to attend to cattle, collect the manure and scatter it over the land, drive the plough and the Persian wheel, and do all sorts of hard farm work which

their employers would sooner be excused. For these services the *athri chuhra* is fed every day, provided with clothes and shoes and gets a considerable quantity of grain each harvest.

Chuhrás.

Mochis.

The Musalmán *mochi* is of the same caste as the Hindu *chamár*. Their proper occupation is with leather, with which they make and mend shoes, whip thongs, and blinkers for the oxen; in return they receive small payments in grain from their patron cultivators. They also do field labour sometimes, cultivating land on their own account, if they can get it. Like the *chuhrás* they are put to odd jobs in the village, but they are above them considerably in social position and would never be expected to touch night soil as the *chuhrás* do. On the whole the *mochi* in this district has a status considerably superior to that of the ordinary Hindu *chamár* and is looked upon more as a village artificer. They are found in every village.

Juláhás.

The *juláha* confines himself in this district wholly to weaving as a trade, though ready to take up cultivation when he can get the land. He is paid for his weaving work by the piece and not by customary dues.

Máchhis and jhínwars.

These two names embrace a class of men whose occupations are concerned mostly with water, and there is no known distinction between the two, except that *máchhis* are all Muhammadans and *jhínwars* only mostly so. They carry water to the cultivators in the field, to the houses, and to all places where villagers meet and require water. They net fish and work at the cultivation of water nuts. They carry palanquins and all such burdens as are borne by a load-stick (*bhaingi*) on the shoulders. Like the *bihishti* among domestic servants, so these men out in their villages are the most willing and good-tempered lot. Their womenfolk furnish midwives and wet nurses; and also the *bhattyáris*, who cook maize and wheat grains in the *karáhi* or iron-plate for the afternoon consumption of the village, or bake the bread at the common oven. Both the *karáhi* and the common oven are very common features of village life in the district, and a *máchhan* or *jhínwari* invariably presides at them in villages, though in towns males of the Khatri class sometimes take up this business if they are in poor circumstances. For their water-carrying services, the *jhínwars* and *máchhis* often receive customary payments in grain.

Lohár.

The *lohár* or blacksmith is a necessary feature of every village; he being the only man who can fit iron on to the plough and other agricultural implements. He is quite separate from

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Lohár.

the *tarkhán*, or carpenter, in this district. The iron is supplied to him, and he makes or repairs as required, receiving in return a share of the grain which amounts on the average to 1·2 per cent. of the gross produce. The *lohár* also cultivates land.

Tarkhán.

The carpenter (*tarkhán*) is also a necessary institution to every village ; all repairs of wood-work are made over to them, the wood being supplied ; for these services they receive on the average about 1·5 per cent. of the gross produce. Some *tarkháns* set up on their own account and get a name for good carpentering, so that people send long distances to them for carts and big wheels of the Persian wheel apparatus. Not a few *tarkháns* turn cultivators, and very good farmers they make, especially the Sikh *tarkháns*.

Kumhár.

The *kumhár* is the potter and brick-burner of the country, who is responsible for providing all the earthenware in use, especially the water-pots for the Persian wheel. For these services he receives grain payments each harvest which amount to ·6 per cent. of the gross produce. He also keeps donkeys, and it is part of his business to carry grain within the village area ; outside that area he will only carry for extra payment. He is the general carrier for all small articles such as manure, fuel, bricks, and the like. This fact and his connection with manure, which is much used for brick burning, puts him on a lower social status than either the *tarkhán* or *lohár*.

Other classes.

Of other classes the *teli* is the oil-presser who also keeps large herds of sheep and goats, for their milk, wool, and flesh, all of which he sells. The *teli* is of very low social standing. The *nai* is the village barber who also carries messages, especially those relating to betrothals, the *chhímba* combines the trades of washing, dyeing and tailoring : in this district *darzi* or tailor is often spoken of as a *chhímba*. *Changars* are menials of low caste, generally called in to plant, reap, or thresh rice. *Mirásís* are the village minstrels who recite on festal occasions, and also act as go-betweens in domestic matters.

Tribal distribution of the villages.

The following are the main settlements throughout the district of the various tribes above enumerated. The Sandhú Jats own the greater part of the villages in the southern half of the Lahore *tahsíl* and about ten in the east of the *tahsíl* near the Amritsar border : north of Lahore itself there is only one village owned by them. In Kasúr there are a great number of Sandhu villages in the angle between the Lahore *tahsíl* and Amritsar district ; a group of about ten in the extreme east of the *tahsíl* ; and a larger group stretching right across the *tahsíl* on the eastern side of the road from Ganda Singhwála to Amritsar : there

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Tribal distribution of the villages.

are a few more scattered about the rest of the *tahsíl*. In Chúnián the great majority of the villages north of the Lahore-Multán Railway are owned by Sandhús, about eight in the angle between that railway and the Kasúr *tahsil* boundary, and a few more around the Kasúr-Lodhrán Railway, where it enters the Montgomery district. In Lahore *tahsíl* there are no Sidhu villages : in Kasúr there are four or five along the Chúnián boundary, one just north of Kasúr itself, and a couple in the Sur Singh *zail* : in Chúnián there are a great number to the north-east, east, and south-east of Chúnián itself, stretching down to the Kasúr-Lodhrán Railway, and a few to the south-east of that line. There is a small colony of Dhillons comprising about eight villages between the Rávi, the Amritsar border and the Lahore-Amritsar railway; besides these there are only about three in Lahore *tahsíl*. In Kasúr there are about six, but they are scattered over the whole *tahsíl*, the largest is Sur Singh. In Chúnián there are only three or four isolated Dhillon villages. There are six or seven villages of Gil Jats in Lahore *tahsíl* : in Kasúr there is a group of about eighteen or nineteen near the Sutlej to the south of Patti, another half dozen between them and Khem Karn town, a block of four on the Khem Karn-Amritsar road about 12 miles north-east of Khem Karn and two or three more to the south-east of Kasúr. In Chúnián there are about four Gil villages amongst the Sandhu villages in the north of the *tahsíl*, and four or five more south of the Lahore-Multán Railway. There are eight Bhullár villages along the Kasúr boundary of the Lahore *tahsíl* and a group of about twenty on the Kasúr side. In Chúnián there are one or two along the Sutlej. There are no Manhes villages in the Lahore or Kasúr *tahsíl*, but there is a group of about ten in the extreme west of Chúnián *tahsíl* along the Rávi.

There are a good many Rájpút villages in Lahore *tahsíl*, nine on the Rávi north of Lahore ; thirteen or fourteen scattered around Niázbeg. eight adjoining Cantonments on the east, and north east ; a group of five on the Lahore-Amritsar road close to the district boundary ; and about ten scattered about in the south of *tahsíl*. In Kasúr there is a group of four on the Kasúr-Ráewind road, five along the Chúnián border, and seven others in different parts of the *tahsíl*. In Chúnián there is a group of nine on the Montgomery border to the south of Chúnián town, seven round Khudián town, and some ten other isolated villages mainly towards the south. There are three Dogar villages in Lahore *tahsíl*, two of which are in the extreme north ; there are some twenty-three along the Sutlej bank in Kasúr, and four isolated villages between

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Kasúr and the Katora Canal. In Chúnián all the Dogar villages (about thirty in number) are along the banks of the Sutlej.

Tribal distribution of the villages.

Aráins own a solid group of about thirty villages roundabout Lahore, and about twenty in other parts of the *tahsíl*. They also own about thirty villages between Kasúr and the Sutlej and six more in the eastern half of the *tahsíl*. There is a group of eleven Aráin villages to the south of Chúnián town, and fifteen or sixteen more including Khudián in the rest of Chúnián. Awáns own three villages near Lahore and Mahtams own three near Lahore and six in the south of Chúnián *tahsíl*. Labánás own nine or ten along the Rávi, north-east and south-west of Lahore, and Kambohs own the village of Ichhra near Lahore, four villages to the south and south-west of Kasúr, about nine over the border in Chúnián, and two near Chúnián itself.

Leading families.

In the following paragraphs is given a short account of each of the leading families of the district. More detailed notices of each of them will be found in the new edition of "Griffin's Punjab Chiefs," as revised and brought up to date in 1909. Families which once were famous but are no longer represented in the Darbar lists have of necessity been omitted.

Rája Fateh Singh.

Rája Harbans Singh, father of Rája Fateh Singh, was the younger brother of Raja Tej Singh. Harbans Singh was born in 1846 by a different mother from Tej Singh's; soon after his birth he was adopted by Tej Singh, who at that time had no son. Tej Singh died in September 1862, and Rája Harbans Singh was made a ward of the District Court at Lahore. The Rája came into a very large and unembarrassed property in 1867 at the age of eighteen years, but the estate had again become deeply involved by his death in 1900. Rája Kirthi Singh, the eldest son, succeeded and the family *jágír* was again placed under the Court of Wards. Rája Kirthi Singh died suddenly in 1906, leaving no son. His younger brother, Rája Fateh Singh, has succeeded to the family seat in Darbár and to the *jágír*, the lands of which are mostly situated in Gujránwála though there are 16 estates belonging to it in this district; the immoveable property other than the *jágír* was divided between the late Rája's widow and his two brothers. The *jágír* was released from the Court of Wards in 1915. The Rája lives generally at Shekhupura, a large town of the Gujránwála District, not far from the Lahore border. In 1859, subsequent to his adoption of Rája Harbans Singh, a son, Sardar Bahadur Sardar Narendra Singh, was born to Rája Tej Singh. Disputes as to the succession arose until, by an agreement effected in 1886, Rája Harbans Singh made over to Sardar Narendra Singh a considerable portion of his property. Sardar

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Narendra Singh died in 1904 and was succeeded by his only son Sardar Bikram Singh, who resides in Amritsar, where he is an Honorary Magistrate and Civil Judge of the 1st Class.

Raja Fateh Singh. Nawáb Fateh Ali Khán.

Nawáb Fateh Ali Khán, C.I.E., is the head of the well-known Kazilbásh family. The first Nawáb, Ali Raza Khán, rendered valuable service to the British Government at Kábul in the first Afghán campaign of 1839. These services were performed by him at the greatest personal risk and to the loss of his wealth and hereditary estates. Finding his life in danger in Kábul he accompanied the British forces to India. From then onwards the family has resided in Lahore. When the mutiny broke out the family came greatly to the front and did valuable service, in recognition of which Ali Raza Khán, the head of his family, was granted a *talukdári* of 147 villages in Bahraich, Oudh, worth Rs. 15,000 per annum. He also received the title of Khán Bahádur and was created a Náwab in 1864, two years before his death. Ali Raza Khán left three sons, the eldest of whom, Nawázish Ali Khán, was appointed Nawáb on his father's death. This gentleman, who held the difficult position of President to the Lahore Municipal Committee, for several years, proved himself a worthy successor to his father and earned for himself a name much revered by Europeans and natives alike. In 1885 the Companionship of the Indian Empire was conferred upon him and three years later he was created a Knight of the same Order. In 1886 he received as a grant from Government the proprietary rights free of revenue in Rakh Juliána of Lahore *tahsíl*. In 1887 Nawáb Nawázish Ali Khán was appointed an additional member of the Supreme Legislative Council of India. In August 1889 he started on a tour through Europe, his ultimate object being the pilgrimage to Mecca. He arrived in Karbala and there contracted an illness, of which he shortly died in October 1890. His younger brother, Nasir Ali Khán, succeeded to all Nawázish Ali's estates in Oudh and in the Lahore District; he was also confirmed in the title of Nawáb in 1892. Nasir Ali Khán served for twenty-five years in the Provincial Civil Service, and died in 1896, being succeeded by his nephew, Fateh Ali Khán, who inherited the title of *Nawáb* and his uncle's estates; and became the representative of the family with a seat in Provincial Darbárs. In 1902 he proceeded to England as one of the representatives of the Punjab for the Coronation of His Majesty the King, and in 1903 was invited as an official guest to the Delhi Darbár, at which he was invested as a Companion of the Order of the Indian Empire. In 1904 he was made an additional member of the Governor-General's Legislative Council. The Nawáb's devotion and loyalty to the British Government

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have been repeatedly proved and have won the commendation of successive Viceroys and Lieutenant-Governors. He is a liberal subscriber to all charitable causes and has earned the respect of all classes both as a public-spirited citizen and as one of the leading Muhammadan noblemen of the Punjab.

Díwán Kailás Náth.

Díwán Kailás Náth is a great-grandson of Rája Dína Náth, the Talleyrand of Punjab in the latter days of the Sikh Empire, a member of the Council of Regency before the Annexation and an able adviser. After the annexation of the Punjab Rája Dína Náth was confirmed in all his *jágírs* worth Rs. 46,460 annually, which he held till his death in 1857. Buildings left by him in the Lahore city are a *shiwála* near the Police Court, for the support of which he alienated a *jágír* of Rs. 500 still maintained in perpetuity, and another *shiwála* near the Wazír Khán mosque. Amar Náth, the eldest son of Rája Dína Náth, was a man of considerable ability and was the author of some very beautiful sonnets, also of a valuable and interesting history of Ranjít Singh. He enjoyed from Government a cash pension of Rs. 4,000 per annum, which on his death was converted into a *jágír* of the same amount to descend in perpetuity according to the rules of primogeniture. Díwán Amar Náth died in 1867, leaving two sons Díwán Rám Náth and Pandit Man Náth. Díwán Rám Náth was appointed an Extra Assistant Commissioner in 1882 and was selected for a District Judgeship in the higher ranks of the Punjab Commission in 1884, a post which he held till his retirement. He succeeded to his father's position on the Provincial Darbar list and was a Fellow of the Punjab University. In 1896 in recognition of his integrity and work as District Judge he was granted the personal title of Díwán Bahádur. He died in 1904 and was succeeded in the title of Díwán, his *jágír* of Rs. 4,000 and property by his son Díwán Kailás Náth, who, being of unsound mind, is only nominally head of the family. The whole of the property held by Díwán Amar Náth is now managed by the Court of Wards on behalf of Díwán Kailás Náth and his cousins, Díwán Som Náth and Pandit Gyán Náth. Díwán Rám Náth's younger brother Pandit Man Náth, who was born in 1860, finally became Chief Judge in Jammu. He died in 1894. His eldest son, Som Náth, who is an Extra Assistant Commissioner, has been allowed by Government to prefix the courtesy title of "Díwán" to his name.

Bhái Gurdit Singh.

Bhái Gurdit Singh represents one of the most influential of the religious families at the Sikh Court of Lahore. Basti Rám was the first prominent member of the family; he and his son Harbhaj Rái were both in high favour with Maharája Ranjít

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Singh. When the Punjab was annexed in 1849, the family held *jágírs* amounting to Rs. 49,000, of which Rs. 22,447 were maintained, some permanently and the rest temporarily. Bhái Nidhán Singh, a great-grandson of Bhái Basti Rám, was made in 1846 a member of the Council of Regency, which office he held till the annexation. Bhái Nidhán Singh died in 1856, and his cousin Bhái Charanjít Singh was recognised as the head of the family. He was a good scholar in four languages, was deeply interested in educational matters and was appointed an Honorary Magistrate in 1879. On his death his *jágír* was resumed, his four minor sons receiving in lieu a grant in perpetuity of Rs. 3,133 per annum. His cousin Bhái Nand Gopál became the representative of the family; he was a Provincial Darbári and for some time a nominated member of the Lahore Municipal Committee. Bhái Nand Gopál died without issue in 1895, but he had adopted as his son Manohar Lál, a grandson of his sister, who is alive and a Divisional Darbári. On Bhái Nand Gopál's death, Bhái Mihán Singh, son of Nidhán Singh, was acknowledged as the head of the family. He was a member of the Lahore Municipal Committee from 1876 to his death, and was appointed an Honorary Magistrate in 1882. In recognition of these services he received the title of Rái Bahádur in 1891. He was nominated a Fellow of the Punjab University in 1898. Bhái Mihán Singh was one of the most prominent citizens of Lahore and exercised a powerful influence for good in the city. He died in 1900, leaving two sons, the elder of whom, Bhái Hardiál Singh, is a *Tahsíldár*, and has succeeded to his father's seat in Divisional Darbárs. Since the death of Mihán Singh, Bhái Gurdit Singh, the eldest son of Charanjít Singh, has been recognised as the head of the family, and is a Provincial *Darbári*. He is in charge of Maháraja Ranjít Singh's tomb at Lahore and is a member of the Managing Committees of the Aitchison Chiefs' College and the Khálsa College at Amritsar. From 1900 to 1902 he was a member of the Municipal Committee of Lahore and in 1903 he was invited as an official guest to the Coronation Darbár at Delhi.

Díwán Bahádur Díwán Narendra Náth.

Díwán Bahádur Díwán Narendra Náth belongs to a Kashmíri Brahman family who emigrated to Hindustán in the 18th century owing to the persecution of the Hindus by Ahmad Shah Abdáli after his conquest of Kashmír. The family, whose most prominent members were Díwán Ajodhya Pershád, grandfather of Díwán Bahádur Díwán Narendra Náth, and Rája Dína Náth, cousin of Díwán Ajodhya Pershád, attained to a position of great eminence at the Sikh court. After the annexation Díwán Ajodhya Pershád gained a high character with all English officers for his upright and honourable dealings

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Díwán Bahádur Díwán Narendra Náth.

and a good name with the public for justice and impartiality. The *jágírs* of the Díwán had lapsed to Government at annexation, but he was granted a pension of Rs. 7,500 and of this Rs. 1,000 was sanctioned to be upheld to him and his heirs in perpetuity. Also in 186 an area of 1,200 acres was granted to him from Hinjarwál *Rakh*, which is now known as Ajodhiápur. Díwán Ajodhya Pershád died in 1870 and his son Baij Náth in 1875. Díwán Narendra Náth was 11 years old when his father died; his estate, which was saddled with a heavy debt of Rs. 40,000, was restored to solvency under the management of the District Court of Wards at Lahore. A life pension of Rs. 1,625 was sanctioned to the young Díwán over and above the income of the estate of Ajodhiápur. After attaining his majority he was granted a seat in Provincial Darbárs and was allowed to assume the hereditary title of Díwán. In 1886 he obtained the degree of Master of Arts and in the following year was nominated a Fellow of the Punjab University. In 1888 he was selected for the post of Assistant Commissioner under the Statutory Civil Service Rules and in 1895 was promoted to the rank of Deputy Commissioner, which he still holds. He was granted the title of Díwán Bahádur as a personal distinction in 1908. The Díwán has travelled extensively in India, Ceylon, Europe and Egypt. He enjoys perpetual *jágírs* in nine villages in the Lahore *tahsíl*, of one of which, Amírpur, he is also owner.

The Nakai family.

Hardiál Singh of Jajja is the present head of the family of Sardár Káhn Singh, Nakai, though the best known member is Abdul Azíz, the third son of Sardár Káhn Singh, who lives at Wán Ádhan and was early in life converted to Islám. The family which derives its name from the Naka country, lying between Lahore and Gugera, was one of the smaller *misls* of the Sikh confederacy and had concluded a matrimonial alliance with the great Ranjít Singh, gained a large amount of territory in the Chúnián, Kasúr and Gugera *tahsíls*, but was deprived of it by Maharája Ranjít Singh, Sardar Káhn Singh, who then represented the family, being left with only a few estates round Dehrwál village near the Rávi in the Chúnián *tahsíl*. After annexation Sardár Káhn Singh was left in possession of a life pension of Rs. 3,840 in addition to a *jágír* revenue of Rs. 11,980. Hardiál Singh holds a *jágír* of Rs. 2,000 per annum granted in 1862 to Chattar Singh, son of Sardár Káhn Singh, and his heirs male in perpetuity according to the rules of primogeniture, and Abdul Azíz has a life *jágír* of Rs. 1,200. Dín Muhammad, son of Abdul Azíz, is a *Náib Tahsíldár*. There has been considerable ill-feeling between the Sikh and Muhammadan branches of the family.

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Khán Sáhib Fakír Saiyad Zaffar-ud-dín, Bukhári.

The Fakír family of Lahore claims its local name *Bukhári* from the fact that its founder Jalál-ud-dín, a priest with a great reputation for sanctity who afterwards migrated to the Punjab, resided at the close of the 7th century of the Muhammadan era at Bukhára. The first member of the family to come to prominence was Aziz-ud-dín, who made a success as the private physician of Mahárája Ranjít Singh and was liberally rewarded by the monarch. In all matters connected with Europeans and the English Government Azíz-ud-dín was the best and truest adviser of Mahárája Ranjít Singh. He enjoyed also a great reputation for his courtier-like manners, his eloquence, poetry and elegant writing. Azíz-ud-dín died in 1845. During the life-time of Fakír Azíz-ud-dín his brothers, Imám-ud-dín and Núr-ud-dín, played subordinate parts, but both were men of some importance, and the latter in particular, from whom Khán Sáhib Fakír Sayad Zaffar-ud-dín is descended, demands some notice. From 1818 he was in attendance at the Sikh Court and was entrusted with multifarious responsible duties, including that of Royal Almoner. Along with his famous brother, Núr-ud-dín was closely connected in the conduct of negotiations with the British Government in which he always displayed the most kindly spirit, and in 1846 he was appointed a member of the Council of Regency. In 1850 the Supreme Government confirmed to him for life all his *jágírs* and allowances amounting to Rs. 20,885 per annum. Núr-ud-dín died in 1852. Of his descendants the most prominent was his third son, Fakír Saiyad Kamar-ud-dín, who became attached to the Sikh Court at an early age. In 1882 a *khillat* of Rs. 500 was conferred on him by the Punjab Government, and in the same year he was granted proprietary rights and later the *jágír* rights in 700 *ghumaos* of waste land in the Lahore *tahsíl*, where he founded the village of Jalálábád. He was for some years a member of the Lahore Municipal Committee and of the District Board, and was the senior Honorary Magistrate in Lahore, one of the oldest fellows of the Punjab University and a Provincial Darbári. For his valuable services in all these capacities he was made a Khán Bahádur at the Jubilee of 1887 and a Commander of the Indian Empire in 1909. On his death in 1909 his eldest son, Khán Sáhib Fakír Sayad Zaffar-ud-dín, an Honorary Magistrate and retired Deputy Superintendent of Railway Police, became the head of the family, succeeding to a part of the family *jágír* and property, and to the seat in Provincial Darbárs; the bulk of the personal property was left by Fakír Sayad Kamar-ud-dín to his second son, Jalál-ud-dín. Another prominent member of this important family, for a fuller notice of which space is unfortunately

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Khán Sáhib Fakír Saiyad Zaffar-ud-dín, Bukhári.

insufficient, was Fakír Sayad Iftikhár-ud-dín, great nephew and son-in-law of Fakír Sayad Kamar-ud-dín, who after a distinguished career in Government service, including the post of British Envoy at Kábul, died in harness as Settlement Officer of Hoshiárpur in 1914 He leaves a minor son, Fakír Sayad Síráj-ud-dín.

Díwán Kishen Kishore Dháriwála.

Díwán Kishan Kishore is the present head of a family which attained to eminence in the service of Mahárája Ranjít Singh; it derives its name from a humorous nickname given by the Mahárája to Díwán Ratan Chand, the grandfather of Díwán Ráj Kumár, to distinguish him from another Ratan Chand at the Court. Díwán Ratan Chand was employed in the Postal Department under the Sikhs and enjoyed cash allowances as well as *jágírs* in estates in various parts of the Punjab. After the Sutlej Campaign he was appointed Postmaster-General in the Punjab and did excellent service throughout the rebellion of 1848-89. On the annexation of the Punjab certain of his *jágírs* amounting to Rs. 6,800 were released to him for life free of all service and a garden worth Rs. 200 near the Sháhálmi Gate of Lahore was released to him and his male heirs in perpetuity. He was appointed an Honorary Magistrate of Lahore City in 1862; in this capacity he showed much activity and intelligence. He was always liberal when money was required for any work of public utility, he built a fine *sarái* and tank near the Sháhálmi Gate and had a large share in the formation of the public gardens round the city. He was created a Díwán by the Supreme Government in 1865. He died in 1872. He was succeeded by his eldest son Díwán Bhagwán Dás, who was granted a *jágír* of Rs. 2,585 under a *sanad*, dated 7th January 1874. He too was a Provincial Darbári and an Honorary Magistrate of Lahore, took a keen interest in city matters, erected several buildings and was a gentleman of public and enlightened spirit; the honorary title of Díwán was conferred on him in 1892. Díwán Bhagwán Dás died in 1906 and was succeeded by his son Díwán Ráj Kumár who only survived him for three years. Díwán Ráj Kumár's eldest son, Díwán Krishan Kishore, who is now the head of the family, has succeeded to the family *jágír*, property, title and seat in *Darbár;* he was educated at the Government College and was made an Honorary Magistrate for Lahore City in 1908. Lála Harnám Dás, younger brother of Díwán Ratan Chand, is a retired Extra Assistant Commissioner. He is an Honorary Magistrate in Lahore, but resigned on account of old age in 1907. His son, Moti Rám, is a *Tahsildar*.

[P]andit Amar [N]áth.

Pandit Amar Náth is the leading representative of a Brahman family whose traditions go back to the year 1244 when

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Pandit Amar Nath.

Alla-ud-dín Masud was king of Delhi and which settled in Lahore about the middle of the 18th century. The founder of the fortunes of the family was Brij Ráj or Brij Lál, who was made Pandit when Ranjít Singh rose to power and was appointed to read and explain the sacred Sanskrit books, holding this post and remaining in high favour till 1833. Pandit Madhsúdan, his son, was also a great scholar; he also held office at the Sikh Court and enjoyed valuable *jágírs*. On his death in 1863 a bequest by him of his entire property along with the perpetual *jágír* to his fourth son Devi Ditta Pershád was contested in the Civil Courts by the other heirs. Eventually by a compromise all the property with the exception of the *jágír* revenue was divided equally among all the sons. Pandit Rádha Kishen, eldest son of Pandit Madhsúdan, received a grant of 2,000 acres of land in proprietary right in *tahsíl* Chúnián, now known as the village of Kot Rádha Kishen, as the reward of his personal exertions in encouraging Sanskrit learning and in promoting the Punjab University College movement. On Pandit Rádha Kishan's death Rs. 1,200 out of his *jágírs* were continued to his son Pandit Rishi Kesh, who also inherited his private property. Pandit Rishi Kesh, after a career of public utility died in 1888. His son Pandit Bansi Lál having died childless in 1897, his property went to his widows, and his seat in Darbár to Pandit Amar Náth (see below), the family *jágír* being divided in three equal shares between (*a*) Amar Náth, (*b*) Jowala Dat Pershád, and (*c*) Sohan Lál and Panna Lál, jointly, the grandsons of Bál Kishán, second son of Pandit Madhsúdan. Pandit Amar Náth is the only son of Pandit Har Kishan, who predeceased his father Pandit Madhsúdan; he is an Honorary Magistrate and a Provincial Darbári, with a seat senior to his cousin Jowála Dat Pershád, son of Devi Ditta Pershád.

Khán Bahádur Sheikh Nasír-ud-dín.

The founder of the fortunes of this family was Sheikh Mohi-ud-dín, who when very young attracted the attention of Díwán Moti Rám and so came to the notice of Maháraja Ranjít Singh. His son Imám-ud-dín Khán was Governor of Kashmír, when that province was made over to Máháraja Gulab Singh by the Treaty of the 16th March 1846. In 1848 when almost all were traitors to their Government in the Multán rebellion, Sheikh Imám-ud-dín remained faithful, and both he and the troops he raised, to the number of 2,000, behaved well before Multán and distinguished themselves in several actions with the rebels. For these services he subsequently received a life cash pension of Rs. 11,600 and his *jágír* of Rs. 8,400 was confirmed to him. In 1857 he raised, under the orders of Government, two troops of cavalry for service at Delhi. He

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Khán Bahádur Sheikh Nasir-ud-dín.

died in March 1859, aged 40, leaving one son Sheikh Ghulám Mahbúb Subháni, who was born in 1842. In 1862, at the recommendation of the Punjab Government, the Supreme Government sanctioned *jágírs* of Rs. 5,600 being upheld in perpetuity, while the remaining *jágírs* with Ghulám Mahbúb Subháni were to lapse at his death. After living the greater part of his life at Lahore, where he took no part in public affairs, the Sheikh died at Delhi in 1903 during the Coronation Darbár which he was attending on the invitation of Government. He left no direct heir, as both his sons died in infancy. His *jágír* lapsed to Government, but his cousin Sheikh Nasír-ud-dín inherited all his private property and became the head of the family. Sheikh Nasír-ud-dín is a retired Extra Judicial Assistant Commissioner in the Punjab and was for nearly three years Wazír of the Baháwalpur State, a post which his father, Firoz-ud-dín, had held before him. He received the title of Khán Bahádur on the 1st January 1909.

The Kamla family.

The distinctive name of the family Kamla (idiot) was applied by Sardar Hari Singh Bhangi to the younger (Godh Singh) of two brothers, sons of a Chaudhri of Maniháia in the Lahore District, who were fighting in his service on account of reckless but, as it proved, successful bravery performed by him in war. The living members of the family are descended from Uttam Singh, the elder brother, who was also a fine soldier and, after being handsomely rewarded with *jágírs,* was in his old age appointed by Mahárája Ranjít Singh Judge at Amritsar. The family maintains its military traditions, having at present three members serving in the 30th Lancers. Sardár Tára Singh, who lives at Kulla in the Lahore District, was for some years an Honorary Magistrate at Patti and is a Divisional Darbári; he served like his father Sardár Sher Singh with great distinction in the Haiderábád contingent; and owns land in the Lahore District and in Oudh. Sardár Baghel Singh, son of Suchet Singh, is an Honorary Magistrate and a large landowner in Oudh and is a Divisional Darbári in this District, where he has acquired some land by purchase in *tahsíl* Chúnián.

Sardár Sáhib Bhái Teja Singh of Thethar.

The family are Sidhu Jats of the village of Thethar in the Lahore *tahsíl*. Four brothers, the sons of Prem Singh, were famous fighting men in Sikh times, the second, Shamír Singh, excelling in the use both of the bow and of the musket. Shamír Singh built the fort of Gobindgarh at Amritsar in 1808 by direction of Mahárája Ranjít Singh and became its warden. The family has remained constant to its military tradition; since the annexation it has been the rule rather than the exception for the

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Sardár Sáhib Bhái Teja Singh of Thethar.

members of every single one of the four branches to enter the Army in the service of Government. The younger members of the family continue to follow soldiering as a profession, while many of the older members are now at home enjoying pensions, well earned after years of hard service all over India. Of the latter the most prominent are Sardár Sáhib Bhái Teja Singh; Sardár Bahádur Janmeja Singh Resaldár Major and Sardár Gopal Singh, Resaldàr Major. The two first named are brothers, grandsons of Sher Singh, who received the title of *ustád* at the court of Ranjít Singh for his proficiency as a swordsman; Bhái Teja Singh is a retired 1st grade Inspector of Police and a Provincial Darbári and was for ten years native Aide-de-Camp to His Honour the Lieutentant-Governor of the Punjab until the post was abolished; Janmeja Singh, his younger brother, is a retired Resaldár Major of the 21st Cavalry and a Honorary Magistrate in Lahore; the two brothers inherit in enqual shares their father's not inconsiderable property in *Rakhs* Lidhar and Dhalla and in *Mauza* Thethar of the Lahore District and in the Lyallpur District. Gopal Singh, a retired Resaldár Major of the 11th Lancers, is the eldest surviving son of the late Rajendra Singh, a very distinguished Native Officer of the 9th Hodson's Horse; the Rasaldár Major holds the *zail* of Kohrián in which the native village of the family is situated.

Malik Sáhib Khán Kasúria.

The family local name is derived from a grant of 30,000 acres of waste land in the neighbourhood of Kasúr made to its aboriginal members by Ibráhím Khán Lodi. The villages of Harike, Betu and the two Nauls were founded by it, and its members fought on the side of the Pathán Chiefs of Kasúr against the Sikhs until the capture of Kasúr by Ranjít Singh in 1807. Khewa Khán, the then head of the family, received a *jágír* in Mamdot, south of the Sutlej, whither his master has also retired, of the same value as the one which he had lost in Kasúr. Khewa Khán's son, Khair-ud-dín Khán, served with distinction in the first Afghán war and during the latter part of the Sutlej War and the Multán outbreak fought on the side of the British. His nephew and adopted son, Kamál-ud-dín Khán, also served the British Government faithfully in five campaigns. The leading members of the family now are M. Sáhib Khán, who lives at Betu, and M. Ghulám Muhammad Khán, who lives at Naul Uttar; one half of the family *jágír* is held by the latter, and the remaining half by the former jointly with his three brothers. Malik Sáhib Khán is a Divisional Darbári and was formerly a member of the local board at Kasúr.

Sardárs Jhanda Singh and Fateh Singh, Mlwai.

Sardárs Jhanda Singh and Fateh Singh are the present representatives of a family derived from the Nábha State in the

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Sardárs Jhanda Singh and Fateh Singh, Malwái.

Málwa, whose first prominent member was Sardár Dhanna Singh, a brave and successful officer in the army of Mahárája Ranjít Singh. The family *jágírs* to the amount of Rs. 25,000 were continued by the Sikh Darbár to Sardár Kirpál Singh, the grandfather of Sardárs Jhanda Singh and Fateh Singh. When Rája Sher Singh's force rebelled at Multán in 1848 Kirpál Singh separated himself from it, and with a few sowars came into the camp of Major Edwardes with whom he had previously served in Bannu. On annexation his personal *jágír* of Rs. 4,000 per annum was confirmed to him for life, and a new *jágír* of Rs. 5,000 for loyalty at Multán was granted him in perpetuity. Sardár Kirpál Singh performed good service for Government in 1857 and received a *khillat* of Rs. 500 and a *sanad* of approbation. He died in 1859; and his son Sardár Sarúp Singh succeeded to a *jágír* comprising 12 estates, 4 in *tahsíl* Lahore, 6 in Chúnián and 2 in Sharaqpur, which amounted in 1893 to Rs. 7,703. Sardar Sarúp Singh died in 1904; his sons, Sardárs Jhanda Singh and Fateh Singh were then minors and the estate was put under the court of wards. The *jágír*, which under the term of the grant had to be reduced to Rs. 5,000 on the death of Sarúp Singh, and the rest of the property are inherited by the Sardárs in equal shares. Sardár Jhanda Singh, the elder, was educated at the Khálsa College, and Sardár Fateh Singh, the younger, at the Aitchison College and Punjab University. The estate was released from the court of wards in February 1916.

Misr Bishambar Dás.

The Misr family of Lahore, of which *Misr Bishambar Dás* is the present head, is of Brahman origin and came originally from Jhelum. Two of its members occupied the post of Treasurer to Ranjít Singh, one in Lahore, the other in Amritsar, but Rúp Lál was the more famous, having gained a great name for justice and equity as Governor of the Jullundur Doáb under Mahárája Ranjít Singh: he subsequently joined in the Multán rebellion and his estates were confiscated. One of his sons, Misr Sáwan Mal, who died in 1904, served in the British Army with great distinction, and in recognition of his services obtained from Government a *jágír* in four villages, which yielded him Rs. 961 a year. His only surviving grandson, Misr Bishambar Das, has succeeded to his *jágír* and other property. Other notable members of the family in recent years were Misr Sundar Dás, who was for two years keeper of the Privy Purse to Mahárája Dalíp Singh, and died a Provincial Darbári in 1894; Misr Rám Dás, a Provincial Darbári, who died in 1892; and Misr Megh Ráj (died 1864), who after the Sutlej campaign was appointed Treasurer to the Darbár, received the title of Rái Bahádur, was Treasurer of

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the Lahore Division from 1849 to his death and was appointed an Honorary Magistrate in 1862.

Misr Bishambar Dás.

The Mokal family.

This Sidhu Jat family, which hails from the riverside village of Mokal in the Chúnián *tahsíl*, rose during the reign of Mahárája Ranjít Singh by their own strength and prowess in battle. The first well-known member under British rule was Resaldár Mana Singh, who served for three years with distinction in the Banda Military Police; in 1861, when that force was reduced, he was made *zaildár* of Mokal and received a grant of 720 acres of waste land in *Rakh* Mudki of the Chúnián *tahsíl*. He died in 1884. Another well-known and highly respected man of the family was Resaldár Gudar Singh, who died in Mokul in 1890. The *zaildári* is still in the family, being at present held by Arjan Singh, grandson of Resaldar Mana Singh. The head of the family is Khán Bahádur Sardár Abdur Rahmán, eldest son of Rasaldár Gudar Singh. The Khán Bahádur who, like his distant cousin Sardár Ahmad, second son of Resaldár Mana Singh, became a convert to Islám, is a retired Deputy Collector in the Irrigation Department, obtained his title in recognition of his long and approved service of 30 years and his general integrity and is an Honorary Magistrate in Lahore where he lives and a Provincial Darbari. He owns 268 acres of land in Mokal and other villages. Sardár Ahmad is also a retired Deputy Collector of the Irrigation Department and has 30 years' service to his credit; he is a Divisional Darbári, has a large landed property in the Lahore and Hissar Districts and in the Chenab Canal, is the author of several Urdu books on agriculture as well as editor of a newspaper on the same subject and has written a history of the Mokal family.

Sardár Jíwan Singh of Padhána.

Sardár Jíwan Singh is the chief representative of the family of Sukha Singh, the first Sikh convert of the descendants of Changa, thirteenth in descent from Sandhu, the founder of the Sandhu Jat colony in the Mánjha after their emigration from Ghazni in Afghánistán. Changa was an influential *chaudhri* and founded the village of Padhána 16 miles south of Lahore where the family still resides. Sardár Jowála Singh, son of Sardár Mit Singh, who was the son of Sukha Singh, was very eminent at the beginning of the present century both for his bravery and his munificent generosity. He held very large *jágírs* from Mahárája Ranjít Singh, but on his death in 1835 most of these were resumed. No direct descendant of his now lives. The existing members are the descendants of Ganda Singh, the younger brother of Sardár Mit Singh. Sardár Jíwan Singh,

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Sardár Jíwan Singh of Padhána

like his father before him, lives at Padhána, where he is Honorary Magistrate, having jurisdiction in 51 villages of the Kasúr *tahsíl*. The *jágír* allowances have ceased, but the Sardár has proprietary rights in four villages and is in flourishing circumstances. The family is connected by marriage with some of the best houses in the Mánjha.

Sardár Bhola Singh of Jodhpur.

Sardár Bhola Singh of Jodhpur is a man who comes little before the public at present, but deserves mention as the son of Káhn Singh. Káhn Singh was the bravest and the keenest of the Sikh chiefs who fought against the English during the campaign of 1848-49; after annexation he lost the *jágírs* which he had received for excellent services rendered at the head of his Dragoon regiment under the Sikh Government, but received a cash pension of Rs. 600 per annum. When the mutiny of 1857 broke out Káhn Singh was one of the first chiefs selected by the Chief Commissioner for service before Delhi. He was in bad health, but nevertheless went and rendered noble service to the English, fighting for them until he was badly wounded, and then engaged in procuring information and winning over his countrymen to the side of the English. In return for these services the Government gave him considerable *jágír* grants. He died in June 1864 under suspicious circumstances, and Bhola Singh was selected by the Government to succeed him in his *jágírs*. Bhola Singh was Jamadár in the 11th Bengal Lancers, but now lives in his village of Jodhpur.

Other prominent gentlemen.

Besides those whose family claims earn them a place in the "Punjab Chiefs," there are other prominent gentlemen residing in the district, whose distinctions deserve mention in this place. The Hon'ble Khán Bahádur Mián Muhammad Shafi, Bar.-at-Law, is an Additional member of the Imperial Legislative Council. The Hon'ble Mr. Justice Muhammad Shah Dín, Khán Bahádur, is a Judge of the Chief Court. The Hon'ble Rái Bahádur Sir Protul Chandra Chaterji, KT., C.I.E., M.A. LL.D., is a member of the Provincial Legislative Council representing the Punjab University. The Hon'ble Rái Bahádur Lála Rám Saran Dás is a Provincial Darbári and member of the Provincial Legislative Council representing the central group of Municipalities. Díwán Bahádur Sir Kastúr Chand, K.C.I.E., is a Provincial Darbári. Rái Bahádur Pandit Hari Kishen Kaul and Rái Bahádur Lála Ganga Rám, M.I.C.E., are Commanders of the Indian Empire. The latter is also a member of the Victorian Order of the 4th Class Sardár Bahádur B. Rám Singh is a member of the same Order of the 5th Class. Pandit Jowala Dat Parshád is a Provincial Darbári.

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Amongst other Divisional Darbárís may be noticed Sardár Raza Ali Khán, Khán Bahádur Muhammad Sazawár, late of the Postal Department, Khán Bahádur Háfiz Illáhi Bakhsh of Kasúr, Rái Bahádur Lála Mohan Lál, Rái Sáhib Lála Bál Mukand, Rái Sáhib Lála Síta Rám, late Superintendent of the Punjab Government Press, Khán Sáhib Mián Ghulám Mohi-ud-dín of Bághbánpura, Bhái Manohar Lal, Bhái Uttam Singh, Khan Muhammad Shábáz Khán, and Khán Muhammad Bashír Ali Khán.

Descent of Jagirs Act.

(*m*) Seventeen out of the twenty *jágírs*, which have a value exceeding Rs. 250 in this district, have been gazetted under the Descent of Jágirs Act (Punjab Act, IV of 1900), which applies the principle of primogeniture. The list is as follows :—

Serial No.	Name of present incumbent.	Name of *jágír*.	*Tahsíl*.
1	S. Hardiál Singh	Bahrwál	Chúnián.
2	S. Ráshbeg Singh	Todepur	Kasúr.
3	F. Najam-ud-dín	Burhánpur	Lahore.
4	Díwán Narendra Náth	D. Baij Náth's	Do.
5	Díwán Kailás Náth	D. Rám Náth's	Do.
6	R. Fateh Singh	Shekhúpura	Do.
7	S. Gulzár Singh	Kulliánwála, District Amritsar	Do.
8	D. Kishan Kishore	D. Rattan Chand's ...	Do.
9	R. Jaggat Jít Singh	Kapúrthala State ...	Do.
10	B. Tára Singh	Bhái family	Do.
11	B. Partáp Singh		
12	B. Hardiál Singh		
13	B. Gián Singh		
14	B. Sundar Singh		
15	B. Dán Singh		
16	B. Gurdit Singh		
17	B. Manohar Lál		

In the remaining three cases action has not yet been taken owing to the assignees not being of full age.

Non-Christian religions.

(*n*) Table 16 gives the number of males and females and the distribution by *tahsíls* of the urban and rural population

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Non-Christian religions.

who follow each religion. The distribution of every 10,000 of the population over each religion is also given. The most remarkable feature of those figures is the decline in the proportion of Muhammadans and the corresponding gain of Sikhs and Christians. Too much must not be based on these statistics, as they must have been violently disturbed by the transference of the Sharaqpur *tahsíl*, yet the Gazetteer of 1893-94 found a similar rise in the number of Sikhs and Hindus at the expense of the Muhammadans.

Hinduism.

The most numerous sects of the Hindus in this district at the Census of 1911 are shown by the following figures :—

	Males.	Females.
Total number of Hindus	130,691	86,918
Sanátan Dharma	81,219	49,774
Arya	5,729	2,826
Bálmíki	27,041	22,154
Lál Begi	12,540	9,580
Sánsi	1,013	899

Sanátan Dharma was the term employed to denote all followers of the orthodox Hinduism, except the religious orders. But not every professor of the *Sanátan Dharma* can be presumed to be orthodox, as the term includes all shades of belief from the punctilious observance of the daily fire sacrifice to the mere belief in the expediency of styling oneself a Hindu.

Amongst modern developments of deistical unorthodoxy the *Árya Samáj* movement, though in appearance small, numerically, is actually of the greatest importance. Broadly speaking the movement stands for the removal of caste and other restrictions. Although the numbers of the *Arya* movement have not increased very greatly, yet its influence has spread to the extent that very many of the orthodox Hindus are in practice not so very separate from the *Aryas*. Lahore is the centre of the movement and the seat of the Dayá Nand Anglo-Vedic College. The majority of the Hindu students of all the colleges, and a great number of the Government and other clerks go to swell the numbers of the movement. A similar society is the *Brahmo Samáj*, which originated in Bengál, but is now well represented in Lahore, where it possesses a first class College and High School. The *Dev Samáj* is

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an off-shoot of the *Brahmo Samáj* founded at Lahore in 1887. Its chief institutions at head-quarters are the *Vikashalaya* or academy, and a home for married women and widows. The *Bálmíki* and *Lál Begi* sects are those consisting mainly of *Chuhrás*. The *Sánsis* are also ranked as "untouchables."

Sikhs.

The chief sects of Sikhs are as follows :—

	Males.	Females.
Total number of Sikhs.	99,518	69,490
Kesdhári, unspecified	75,457	55,741
Kesdhári, Hazúri	18,920	10,722
Sahjdhári, unspecified	1,949	821
Sahjdhári, Nánakpanthi	2,511	1,317

Sahjdhári are those Sikhs who were enumerated at the Census of 1901 as Hindus on the ground that they did not wear the *kes* and who have been included as Sikhs in 1911 owing to a more extensive scope of the term then adopted. *Hazúri* Sikhs, the sect most numerous sect of the *Kesdhári*, are those followers of Gobind Singh who have paid a visit to Hazúr Singh in the Deccan, where their *Guru* breathed his last, and there been initiated. *Nánakpanthis* are the followers of the Guru Nának, who do not keep the observances of Guru Gobind. Although the first Khálsa Díwán was started in Lahore, the *Tat Khálsa* which, in the rest of the Punjab, and notably in Amritsar, is the largest of the Sikh sects, is only represented in this district by 10 females.

Muhammadans.

The chief Muhammadan divisions are as follows :—

	Males.	Females.
Total number	351,433	474,838
Shia	4,438	3,089
Sunni	342,857	268,254
Reformers	4,121	3,494

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Muhammadans.

Of the Muhammadan religious societies the best known is the *Anjuman-i Himáyat-i-Islám*, founded in Lahore in 1885 but now of pan-Indian fame. Its objects are the dissemination of Western learning amongst Musalmáns and its chief institutions in Lahore are the *Islámia* College and the *Hamídia* School of Arabic.

Ecclesiastic Administration and Christian Mission.—The Anglican Church Administration.

(*o*) The area now covered by the Diocese of Lahore was, until 1877, largely included in the Dioceses of Calcutta and Bombay, and the Diocese was founded in that year as a memorial to Dr. Milman, Bishop of Calcutta, who died at Ráwalpindi when on visitation in the Punjab. The Diocese consists of the Punjab and its dependencies, together with Kashmír and the North-West Frontier Provinces, taken from the Diocese of Calcutta; Sindh, taken from the Bombay Diocese; and Balúchistán and the Persian Gulf coasts, including parts of Persia and Arabia. The present Bishop of Lahore is the Right Reverend Henry Bickersteth Durrant, consecrated in 1913. His predecessors were the Right Reverend Thomas Valpy French, 1877-1888, who resigned; the Right Reverend Henry James Matthew, 1888-1898, who died at Lahore; and the Right Reverend George Alfred Lefroy, 1899-1913, who was translated to the Metropolitan See of Calcutta. The Diocese of Lahore is administered by the Bishop, with the assistance of the Archdeacon of Lahore for English, and of the Archdeacon of Delhi for Indian, work. There are some 110 clergy in the Diocese, of whom rather more than half are Missionary clergy engaged in purely Indian work and about 45 are ministering to British troops and English-and Anglo-Indian congregations.

The Cathedral and Chapter.

In 1874 the foundation stone of what is now the Cathedral Church of the Resurrection was laid by the Archdeacon of Calcutta, and on his appointment as Bishop of Lahore in 1887 Dr. Valpy French pushed forward the completion of the building, which was consecrated on the 25th January 1887. The Cathedral has since then been added to and beautified, chiefly by the efforts of Bishop Matthew, and in 1913 the Western Towers were added, one being a memorial of the Lahore episcopate of Dr. Lefroy and the other in memory of the late Archdeacon Spence Gray. It is situated on the Upper Mall, opposite the Punjab Chief Court. The Cathedral Chapter consisted in 1914-15 of the Bishop of Lahore, who is also Dean of the Cathedral, with the Archdeacons of Lahore and Delhi, and four Canons; while the Cathedral and its parish are served by a senior Chaplain, with a junior Chaplain as his Assistant. There

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are two High Schools, and also two orphanages, for boys and for girls respectively, at Lahore, in connection with the Cathedral.

The Cathedral and Chapter. Churches.

The following are the Anglican Churches :—

(1) The *Church of S. Andrew*, situated on Empress Road, is the Church of the Railway parishes of Lahore and Mughalpura.

(2) *Holy Trinity Church, Anárkali*, is the parish Church of the Lahore Church Mission.

(3) The *Garrison Church of S. Mary Magdalene* is situated at Lahore Cantonment, five miles distant from the Cathedral, and is said to be one of the most beautiful Churches in Northern India. It was consecrated in 1857, just before the outbreak of the Mutiny.

Missions.

The chief missionary agencies in the diocese of Lahore are the Church Missionary Society, which has colleges and schools at Lahore, Amritsar, Pesháwar and elsewhere and centres of Mission work in many of the cities and villages throughout the Punjab, Sindh and Balúchistán ; the Cambridge University Mission, with its head-quarters at Delhi, where there are large Mission colleges and schools, and missions at Karnál, Rohtak, and in the Delhi District ; the Canadian Church Mission in the districts of Kángra and Kulu ; and the National Missionary Society, which in this part of India works in connection with the Anglican Church, and has its head-quarters at Montgomery, with mission stations throughout the neighbouring districts. Two prominent institutions of the Church Missionary Society deserve special notice, *viz.*—

(1) *St. John's Divinity College, Lahore.*—This institution was founded in 1870 by the Reverend Thomas Valpy French, at that time a missionary of the Church Missionary Society, and afterwards first Bishop of Lahore. It is situated in what is still known as Mahán Singh ka Bágh, the whole of which was purchased with funds raised by subscription by Mr. French together with a grant from the Church Missionary Society of 10,000 rupees. Further additions to the site were purchased later, and the College grounds now cover an area of 5 acres. The object of the College is to train Indian Christians as clergymen and catechists for work in North India. Students come to it also from Urdu-speaking centres in the Bombay and Madras Presidencies. The teaching is nearly always given through the medium of Urdu. The staff consists of an English Principal, a Vice-Principal and an Indian Professor. The students do not appear for any Government examinations, nor does the College receive any grant-in-aid from the Government. The English staff is paid by the Church Missionary Society, and the Indian Professor is paid almost entirely by endowment from the interest of a Bishop French Memorial Fund. Scholarships also met by endowment are available for a limited number of students, or the students are financed by the parish which sends them. There is a large library of theological and oriental books for the use of the staff and students and playing grounds. The College Chapel was built in memory of the

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Reverend George Maxwell Gordon, a tutor of the College, who volunteered as a Chaplain in the Afghán war of 1880 and was killed when tending a wounded soldier. Most of the Clergy and Indian workers of the Punjab in connection with the Church Missionary Society have passed through the College, but, as the number resident at any one time is never large, the accommodation not required for Divinity students is placed at the disposal of other Christian students who are studying in various Arts and Medical Colleges in Lahore.

(2) *The Clarkabad Settlement.*—The settlement comprises the entire estate of Clarkabad (so called after the Reverend Robert Clark the first missionary of the Society in the Punjab) in the Chúnián *tahsíl*. The Society at first only held the land, which was the property of Government, on lease subject to its cultivation by Christian tenants but proprietary right has since been granted on the same terms in half the area in 1894 and in the remainder in 1915. The area is about 1,797 acres; the land is all good and is irrigated from the Upper Bari Doab Canal. The population is about 1,400 Christians and a few non-Christians. The tenants pay one-fourth of the produce of their land to the Church Missionary Society. The Mission pays the land-revenue and the tenants the charges due to the Canal authorities for irrigation. The income received by the Mission is spent on the upkeep of the village and upon the Schools and Hospital, and for the general good of the community. Houses are built by the Mission and are rented by the tenants for a small sum. There are two village sites, the main one and a smaller one (Chota Clarkabad) about 2½ miles distant. There is a Church on both sites, the services at which are held in Punjabi, and a day school for boys and girls at the smaller. At Clarkabad proper the schools consist of a Vernacular Middle School for boys with a Boarding School for Christians and a Hostel for non-Christians attached; there are over 250 pupils now on the register, of whom less than one-fifth are non-Christians; most of the non-Christians come from other villages and are reading in the Middle Department; the Boarding School for Christian boys has over 100 pupils and the school has made great progress during recent years; the buildings of the Day School and Boarding School have lately been greatly enlarged, part of the cost being defrayed by a grant from Government. There is a Primary School for girls with a Boarding House for Christians. There are about 60 Boarders and 70 or 80 Day Scholars. Usually all the pupils are Christians. For all Christian children between the age of 6 and 12 education is compulsory. In connection with both the Boys' and Girls' Schools training classes for teachers are carried on. From Clarkabad mission work is also carried on in the rest of the Chúnián *tahsíl*. The dispensary is in charge of an Indian Christian Doctor and has a small ward for in-patients. The present Missionary-in-charge is the Reverend C. M. Gough, M. A., with two European Assistants, one of whom is in charge of the Bishop Lefroy Training School for Village Preachers, and an Indian Christian Manager for the village. There are usually two or three European lady Missionaries in charge of the Girls' School and of work among women.

The American Presbyterian Mission.—The Punjab Mission of the Presbyterian Church in the United States of America was established in the year 1849 by Messrs. Newton and Forman, who arrived in Lahore in that year. The staff now consists of

the Revd. J. C. R. Ewing, D.D., LL.D., and a number of missionaries with their wives and of lady missionaries. The work of the mission is carried on by means of a College, a High School, Primary Schools for boys and for girls, visiting and teaching in *zenána*, two dispensaries, *bázár* and chapel preaching in the city and in villages in the district, village schools, and the supervision and care of two churches in the city and three in the district. The two most important educational institutions of the Mission, *viz.*, the Forman Christian College and the Rang Mahal High School, are described in Chapter III, Section I, *Education.* Three Girls' Schools are superintended by the ladies of the Mission, one for Hindu girls with an enrolment of 100, one for Muhammadan girls with an enrolment of 75 and one for the children of employees of the jails with an enrolment of 18. The two dispensaries, at Delhi Gate and in the villaga of Wágha, are under the medical charge of Mrs. S. C. Das. Last year 11,331 patients visited these two dispensaries. Regular chapel preaching with the distribution and sale of Bibles and tracts is maintained in the chapels at Lohári Gate, Delhi Gate and the Rang Mahal. The village work, which is operated from Lahore, centres in Sharaqpur and Warburton on the one side and in Manihala on the other. There are organised churches at Wágha, Manihála and Sharaqpur, and at 51 other villages there are unorganised groups of Christians. The total Christian community is 4,295; 374 were added during the past year. The two churches connected with this mission in Lahore are the Naulakha Hindustáni Presbyterian Church and the Hira Mandi Church.

The Methodist Episcopal Mission.—The Methodist Episcopal Mission began work in Lahore in February 1881. For 23 years the centre of work was the English Church on the corner of Nicholson and Mayo Roads, but in 1904 the Mission was relieved of the care of the Church by the Wesleyan Methodists. The only institutions belonging to the Mission in Lahore are a Girls' Boarding School, a Boarding School for boys, and a Training School for young men. The Girls' Boarding School teaches according to the Government Code, and receives a grant-in-aid from Government. Both the Boys' Boarding School and the Training School are elementary, and in both schools the pupils are obliged to obtain a working knowledge of the Roman-Urdu before beginning the study of the Persian-Urdu character. The Mission staff consists of an American Missionary and his wife, nine Indian Missonaries with 25 other helpers and their wives, and an American lady missionary with her staff of Indian teachers. On 31st October 1914 there were enrolled in the books of the Methodist Episcopal Church in the Lahore District 8,574

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Christians. About a thousand of these belong to the servant community in Lahore and in the Cantonment; most of the rest belong to the *kamín* class, chiefly *Chúhrás*, among the agricultural community in the compact block of territory from Shahdara south to Rája Jang, covering roughly the western half of the Lahore *tahsíl*. It is to the latter class, whose education is attended with very great difficulties, that the efforts of the Mission have been specially diverted in the last ten years; its itinerant teachers and village preachers have taught the rudiments of reading to quite a number, and still others have learned something in the boarding schools; also it is not uncommon for those who have been taught to teach what they know to others.

Wesleyan Methodist Missionary Society.

The Society does no distinctly missionary work in the Punjab, but supplies a Railway and Army Chaplain at Lahore and has charge of the English Church at the corner of the Nicholson and Mayo Roads.

The Roman Catholic Church—Administration.

The Punjab was erected on the 18th of September 1880 into a Vicariate Apostolic distinct from that of Hindustan. Dr. P. Tosi was appointed Bishop and Vicar Apostolic of the Punjab. Under the Hierarchy proclaimed in 1886 the portion of the Punjab which extends northward from the River Sutlej to the River Jhelum was constituted into a separate Diocese Suffragan of the Metropolitan See of Agra. The first Bishop of the new Diocese of Lahore was Dr. Symphorian Mouard, O. C. When in 1910 the new Archdiocese of Simla was created, the Diocese of Lahore became on the 22nd of May 1913 a Suffragan See to the Metropolitan See of Simla. The present Bishop of Lahore, the fourth by succession, is Dr. F. A. Oestermans, O. C., consecrated on the 29th of June 1905.

Churches.

The following is a list of Roman Catholic churches in Lahore and Cantonments; all are in charge of priests under the jurisdiction of the Roman Catholic Bishop of Lahore :—

(1) The Cathedral of the Sacred Heart,—Lawrence Road.
(2) Church of St. Anthony (*Railway Church*),—Empress Road.
(3) Church of the Immaculate Conception,—Katcheri Road.
(4) St. Joseph's Church,—Thornton Road.
(5) St. Joseph's Church,—Lahore Cantonments.

Schools and Missions.

There are no Roman Catholic Mission Stations in the Lahore District. The Franciscan Nuns have the supervision of the Punjab Female Lunatic Asylum. The following is a list of schools :—

(1) St. Anthony's High School for European and Eurasian Boys. Management : Brothers of St. Patrick,—Lawrence Road.

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Schools and Missions.

(2) St. Francis' Primary School for Catholic Native boys,—Katcheri Road.

(3) Convent of Jesus and Mary and boarding school for European and Eurasian girls—Durand Road.

(4) School of the Sacred Heart for Pársi, Hindu and Muhammadan girls,—Thornton Road. Management: Sisters of Charity.

(5) St. Joseph's Orphanage for Catholic Native girls,—Thornton Road Management: Sisters of Charity.

Societies for the diffusion of Christian knowledge.

The British and Foreign Bible Society.—The British and Foreign Bible Society (Punjab Auxiliary) has a resident Secretary in Lahore, and a central depository in Anárkali Street. This Society, which stands for no particular sect or denomination, was established in Lahore in 1863 and from a very small beginning has grown to controlling work from Delhi to Pesháwar and from Karáchi to the Northern Frontier. Its object is to print and circulate without note or comment translations of the Holy Scriptures in all the languages of the world, thus giving all the races of mankind opportunity for their study. In 1913 the present Society (established in Lahore in 1804) published and circulated over ten million copies of the Scriptures in no fewer than 450 languages; of these the circulation of the Punjab Auxiliary accounted for over 92,000 in 37 languages. The practice of the Bible Society is to sell Scriptures and not to give them away, believing that what a man pays something for he will prize the more; yet to meet the need of even the very poorest, Scriptures are sold in nearly every case at much below their cost of production. Colporteurs and Bible-women employed by the Society are now to be found in every part af the Punjab, and the Society claims to aid the work of every Christian Missionary organisation in the spread of the Gospel and moreover often to reach people to whom no missionary has ever been sent.

The Punjab Religious Book Society.—The Punjab Religious Book Society was established in 1863 and up to 1907 was carried in connection with the British and Foreign Bible Society. On its severance from the Bible Society it was incorporated under Section 26 of Indian Companies Act, 1882, as a wholly independent institution. The main object of the Society is declared by it to be to publish and supply the public with such religious books and tracts in various languages as shall be calculated to promote godliness. All subscriptions and donations, together with profits arising from the Society's business as Book-sellers and Stationers, are devoted to the publication of vernacular literature. Up to date some 1,600 various books and tracts have been issued and many of the Society's publications

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have been recommended for schools and libraries by the Educational Department. The central depôt is in the Anárkali Bázár. An annual grant-in-aid is received from the Religious Tract Society, London.

Societies for the diffusion of Christian knowledge.

The Society for the Propagation of Christian Knowledge—Vernacular Literature Society.—The Society for the propagation of Christian Knowledge carries on its business of producing works in the vernacular through the Vernacular Literature Society. The latter society is mainly concerned with the production of literature in connection with the Church of England, and carries on its book business through the agency of the Punjab Religious Book Society.

The Salvation Army.

The Salvation Army, founded in London in 1865 by the late William Booth, started its work in India in 1882 under Commissioner Booth Tucker, who, together with Mrs. Booth Tucker, still exercises general supervision over its work. The Brigade head-quarters for the Punjab are on Ferozepore Road, Lahore, where there is a Training Home for Punjabi workers together with Boys' and Girls' Industrial Schools, at which education according to the Government curriculum is given. On Jail Road there is a Settlement known as "Danepur," where released prisoners from the Borstal Jail are received and cared for, and there are also some members of the *Sánsi* tribe. The inmates are given employment in a Dairy and in cultivating the 25 acres of land attached to the Settlement as well as in the Government Gardens. There is also a Settlement for Criminal Tribes in the Chánga Mánga Forest, where they are employed in cutting trees and in rearing silkworms. In the Industrial School part of the day is devoted to weaving on the Salvation Army Automatic Loom for boys and to sewing and drawn thread work for the girls. There are now 348 members in 11 towns and villages of the Lahore District, and the staff consists of 59 officers and employés.

Occupations.

(*p*) The principal occupations of the district for males and females are shown in Table 17 of the statistical volume. The numbers of actual workers and of dependants are differentiated for each occupation. In Table XV of the 1911 Census Report the figures for over 150 different classes of occupations are given. The most important occupations in the district are pasture and agriculture, domestic service, industries of the dress and toilet, transport by rail, textile industries, begging and prostitution, and miscellaneous trade.

Food.

(*q*) The staple foods of the city people are wheat, rice and pulses; the other inferior grains are not much consumed.

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Food.

Vegetables and green food are used, and English vegetables are eaten to an increasing extent. Flesh is eaten daily by Muhammadans and Sikhs. The wheat eaten is usually ground and kneaded in water, and made into round cakes or *chapátís*, which are then baked on an iron plate placed on the fire hearth. Pulses and vegetables are cooked, salt, spices and clarified butter being added to give them a relish. The chief meals are at 10 or 11 o'clock in the morning, and at night, but in the city those who have to go to office every day are forced to put their morning meal earlier. The ordinary food of the villagers consists of the cakes made of wheat, gram or barley in the hot weather, and of maize or *jawár* varied with wheat occasionally in the winter. The morning cakes are usually eaten with *lassi* or butter milk, and *ság* of rape or gram leaves. The evening meal is eaten with *dál* of *másh*, *moth* and gram in the summer and *khichri* of rice and *moth* in the cold weather. *Ghi* and *gur* mixed are eaten on festivals and during the *rabi* harvesting to sustain the body against fatigue. The staple food of the ordinary cultivator is wheat if possible, otherwise gram in summer, and maize or *jawár* in the winter. *Jawár* is the staple food of all the poorer classes. Most Musalmáns eat meat occasionally. Sometimes the cultivator goes out to work on an empty stomach, sometimes he eats the remains of last evening's meal with a draught of buttermilk. Similarly the remains of the morning meal are often the light afternoon repast which in the city consists of a few *tolas* of sweetmeats or fruit. The morning meal is usually taken to the cultivator by his wife or children. Rájpúts and Dogars, however, whose women are not supposed to go out into the fields by themselves, have to waste time by coming back to the village. Those who drink the country spirit generally take a little before their evening meal as an appetiser, and more during and after dinner.

Men's dress.

(*r*) In the city there are two styles of dress, one the semi-European affected principally by those who are classed as educated, and the other the native style which is still followed by traders and by the "non-educated" classes The European style consists generally of a shirt and collar, without a tie for the most part; trousers below, a long light coat above opened at the chest and buttoned lower down, but behind like a frock coat; the head covering is generally an ordinary *pagri* over a Turkish fez, Bábu cap, or Afghán peaked cap. Socks are worn and "English" shoes or boots. The native or trading style is a shirt without any collar known as as *kurta* covered by a waistcoat or *kurti* and on the legs a loose loin cloth or tight trousers. Over the body again is worn a kind of long robe by those who can afford it.

CHAPTER I.-C. — Population. — Men's dress.

Native shoes are worn and sometimes socks, and among the younger men sock-suspenders are frequently affected, which in combination with the loose loin cloth present to European eyes a somewhat quaint spectacle.

Out in the village dress is simple in the extreme. Muhammadans wear a *kurta* with a *tahband* or sheet round the legs, *sáfa* (big turban) and a *dopatta* (cloth thrown round the shoulders). Hindus wear a *dhoti* or loin cloth instead of the *tahband*. Sikhs used to wear the *kachh* or loose shorts with a small *pagri*, but now they use a large turban, *sáfa* and tight *pájámás*. In fact *pájámás*, or loose trousers, and coats are beginning to be worn by many people. Formerly some sort of a quilted covering was worn in the winter, or even merely a big unbleached cotton cloak wrapped over the head, but now woollen coats of the English style are worn by those who can afford them.

Women's dress.

Women's clothes have generally more colour in them, especially reds and yellows. One of the most important articles of clothing is the cloth (*chádar*) wrapped round the head, without which it is considered indecent to appear in public. This is used to cover the face when the woman sees some male relative she knows. Often it takes the shape of a *phulkári*, or silk embroidered shawl, but these are gradually being replaced by the English-made cotton wraps. Another head-covering is the *sáhri*, which is wraped round the body, over the hips as well as round the head. On the body is worn a *kurta*, and below either *pájámás*, wide at the hips, and tight round the ankles, or a *ghagra* or petticoat, or both. The shoes are always of the native pattern, and socks or stockings are not worn.

Hindu women, unless widowed, are generally loaded with as much jewellery as their husbands can afford, which take the form of gold or silver ear-rings, neck-bands, bracelets and anklets. Men do not usually wear ornaments, except when, having saved some money, they wear it round the necks in the form of a string of gold *mohurs*. A pensioned sepoy is usually very proud of his medals, and if he appears at *kachheri* or visits a touring officer, he never fails to wear them and expects some notice to be taken of them.

Dwellings.

(*s*) In the city of Lahore itself many of the houses are lofty and to all appearance well built from the outside, but inside they are usually much cramped for space and ill-ventilated. They generally consist of three or four storeys built of burnt brick laid in mortar. Not many have even a courtyard in front. On the basement floor is a small dark room, in which

the women of the house spend most of their day, spinning, cleaning cotton or working with their needles. Next to this room is a small cell, perhaps five or six feet square, in which the grain is ground for cooking. On the floor above is a small room used as a kitchen, from which perhaps a window opens out into the narrow alley outside or a skylight lets in light from above. Adjoining it are two small rooms, of which one is used as a general store-room and the other as a depository for the family valuables. The third floor generally has three sleeping rooms, all very small and ill-ventilated and hemmed in on three sides at least by the walls of the adjoining houses. In these also property may be stored and, if necessary, food is cooked. The fourth floor contains but one small room at the back, the remainder being an open space in front, in a corner of which is a very small latrine. This space is used for sleeping. The houses which are added on the outskirts of the city usually approximate more to the type of European bungalow, and are often surrounded by gardens. These are naturally only inhabited by the rich classes, who, when they can afford it, think it better boldly to move out into the Civil Station. The ordinary agriculturist's house is usually made of large clods of caked mud taken from the bottom of a pond, or of sun dried bricks. However there are few villages that do not own one or two masonry or *pakka* brick houses, the increasing prosperity of the *zamíndar* being marked by the growth of such houses over the district. The house is generally built narrow to avoid expense in wood, which is more costly in proportion to the length of beam. The roof is flat, being made of mud laid over beams and joists of roughly hewn timber. Most of the houses have only one storey, and access to the roof is provided by a flight of mud steps or a wooden ladder ; sometimes a small upper chamber is constructed on the roof. Inside the house below there are probably two or three partitions in which different members of the family can sleep ; the furniture consists of a few bedsteads, reed-stools and spinning wheels for the women. In the wall there are one or two cup-boards for clothes, vessels and other household stuff, and in one corner stands a large barrel-shaped receptacle of mud in which the family supplies of grain are kept. Outside the house in front there may be a verandah consisting of a light mud roof supported on more or less rough standing posts. In one corner is the family cooking place sometimes partly sheltered from sun and rain. Close by is probably another grain bin. On one or two sides of the enclosure are the cattle standings, often with mud troughs constructed for them. Here the women spend most of their day, and here the cattle are tied up at night, unless a separate cattle

CHAPTER I—C.

Population.

Dwellings.

enclosure has been provided near the house. The poorer classes often live in reed-huts, and some nomadic tribes merely carry with them temporary portable shelters of cloth or reed screens.

The Jat houses, whether in the Mánjha or the Hithár, can usually be recognised by the regularity of the building observed in their structure and walls, while Dogars and Aráins exhibit no uniformity either in height or arrangement.

Almost every village has its guest house, which combines the functions of meeting-place and inn. Amongst the Hindus it is called the *dharmsála*, and is in charge of a *sádhu*; amongst the Muhammadans it is kept by a *qázi* and known as a *takia*. There is usually also a mosque, and in some villages a *thákardwára*, in which little images are worshipped by the Hindus. *Dharmsálas* are the best kept, and are usually well-built. In large Sikh villages the landowners usually make a grant for their up-keep. *Takias* are less pretentious, but are usually surrounded by a small grove of shady trees. They are places of frequent resort both for the villagers and passers-by, who can always get a smoke there from the small fire which is kept burning for that purpose.

Disposal of the dead—Muhammadans.

(*t*) Muhammadans like Christians bury their dead. The body is first washed and clothed, and, if the family is well off, put in a coffin, and then carried to the burial ground, where after prayer has been offered up, it is interred. On the day of the death the members of family may not cook in the house but are fed by their friends. All the relations are supposed to visit the family and offer their condolences, while for seven days the women of the house and the neighbours are gathered together and weep. Generally on the seventh day, the ceremony of *kul* is performed. Passages from the *Qorán* are read aloud by the *Mullah*, and some presents of money or food are given to the menials. On the fortieth day the rites are repeated; sweetmeats are distributed and where the family is well-to-do clothes are given to the women relatives.

Hindus.

Hindus burn the bodies of their dead; the bones and ashes are collected and taken home. If the family is well-to-do the relics are sent on the fourth day to the Ganges. If the mourners are poor, they keep the relics with them till they or some friends are going on a pilgrimage to Hardwár and can take them with them. If the deceased is an old man, they wrap his body in a fine coloured cloth as well as the white shroud, and ring bells and scatter over the body sweets and dates, which are taken by the menials. For thirteen days the members of the family and near relations are considered impure, and no one eats in their

Hindus.

house. After this period the pollution is cleansed, and rice-balls are offered to the dead through the Brahmans. After six months a bed with bedding, new clothes and cooking utensils are given to the *parohit*: the rich give ornaments and cows also. After one year a cow is fed. After a period of at least three years the Brahmans are again fed for the comforting of the soul of the deceased.

Sikhs.

Sikhs and Aryas do not observe these rites. The body is burnt, and the bones and ashes collected in an urn or other vessel, and thrown into the river. If there is no river conveniently near, a canal, tank, or pool serves the purpose.

Amusements and festivals.

(*u*) The daily round of the cultivator, and his women-folk, and even that of the trading classes of the city does not leave a great deal of leisure for amusement. The day is begun by ablutions and prayer at the mosque by the Musalmán, and by his bathing and *púja* by the Hindu, but after that the daily tasks occupy both men and women till the evening. Then it is that any amusement takes place, chiefly amongst the younger members of the community. Native games and sports were formerly very numerous, but now have been gradually superseded by those of European introduction. Cricket has almost become the national pastime of India, but hockey has recently become a formidable rival, being more suited to the native qualities of quickness, nimbleness, and trueness of eye than football, which is nevertheless often played by the student class. Gymnastic exercises and tennis are also largely indulged in, and in the villages the Sikh Jats go in extensively for athletics. Of native amusements wrestling is practised almost as an art; the Lahore wrestlers have in the past been famous all over India. Bird and ram fighting are also popular amusements. Childrens' games are countless, the best-known being *kili thipa*, *karanga*, *gedián* and *thappa*. *Kili thipa* is played with flat circular desks about 2½ inches in diameter and half an inch thick, which are aimed at a brick. There are various complicated rules, one of which is that the loser must carry all the other boys on his back. *Karanga* is played on trees, one boy having to catch one of the rest without alighting on the ground. *Gedián* is played with small pieces of wood, the boy who drives his first across a line drawn on the ground is the winner, and carries off the other boys' piece of wood. *Thappa* resembles "fox and goose," *ghorghunda* is hide and seek and *ghori tapan* leap frog. Tops of clay are used, and kite flying is an amusement in which marvellous skill is displayed. Girls play with dolls, or *gudián patola*, the game generally taking the

CHAPTER I.—C. Population. Amusements and festivals. Fairs and festivals.

form of a marriage between a male and female dolls or a lamentation for the death of a doll.

The chief fairs and festivals of this district are as follows :—

The *Bhadar Káli* fair at Niázbeg in honour of the Hindu goddess *Bhadar Káli Devi*, who is supposed to be potent for good or evil. Her temple is at Niázbeg. The fair is held in the month of *Jeth*, between the middle of May and the middle of June. Persons of all classes come from Lahore City, but the villagers who frequent it are principally Sikhs from Lahore and Amritsar District. The attendance usually runs in several tens of thousands.

The *Basant ká Mela* is held in January at the tomb of *Haqiqat Rái*, near the village of Kot Khwája Said, three miles from Lahore. The fair is held at the time of the blooming of the mustard seed, and its frequenters wear yellow *pagrís* or mustard seed in their turbans.

The *Charághan ká Mela* is held at the *Shálámar* Gardens on the last Saturday and Sunday in March. Originally it was a religious pilgrimage to the tomb of *Mádho Lál Hussain* at *Bághbánpura*, but as the fair became more popular it was moved to the gardens. All classes of males attend, but not the better classes of women. A horse fair is held during the three days preceding the great fair day.

The *Rám Thamman* fair is held in the village of *Thamman*, near Kasúr, in April on the Hindu festival of *Baisákhi*. The railway has shorn it of most of its former importance as people now prefer to visit the more important *Baisákhi* festival at Amritsar.

Id-ul-Zuhá is held on the tenth of the Arabic month of Zi'l Hij in commemoration of Abraham's sacrifice of his son Ismail. A cow, sheep, goat or camel is sacrificed by all good Musalmáns who eat some, and give away the rest in alms. *Id-ul-Fitr* is the festival of breaking the fast that has been observed throughout the month of *Ramzán*. Prayers are offered at the *Sháhi* and other mosques in the morning ; and in the evening a fair is held at the tomb of *Sháh Abdul Mu'áli* outside the *Mochi* Gate.

The *Qadamon ká Mela* is held in February outside the Delhi, Lahori and Sháhálmi Gates of the City.

Guru Arjan's fair is a fair of fairly recent date held by the Sikhs in May at the tomb of the *Guru* near the Fort.

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Fairs and festivals.

The *Dasehra* is a Hindu festival held generally in October, and lasts about ten days. It commemorates the victory of Rám Chandar, Rája of Oudh, over his rival Ráwan, who had played Paris to his Menelaus. The first nine days are devoted to general holiday making and the people are kept amused by pictures of the hero's life, his hardships and his early skirmishes with Ráwan. On the tenth day all the Hindu population of Lahore assemble on the parade ground to the north of Fort to witness a celebration of the last great battle. Ráwan being defeated, his effigy is burnt amidst a grand display of fireworks, after which the people disperse.

The *Muharram* festival begins on the first of the Muhammadan month of that name. It commemorates the massacre of Imáms Hussain and Hassan, sons of Ali. On the 7th of the month the eleven *Mehdis*, which commemorates Hussain's marriage, are carried about the city, and on the 10th the *Ta'zias*, some two hundred in number, make the rounds of the principal streets. The *Ta'zias* of Lahore are noted for their splendour. The *Karbala* to which they are taken for burial is outside the city near the old Rávi. The festival is purely Muhammadan, but plenty of Hindus collect to see it. It has often been the occasion of fights between Hindus and Muhammadans, and also between Sunnis and Shi'as.

Names and titles.

(*v*) None of the names or titles used in the district are peculiar to it. The Sikh method of choosing a name, though common to all the Sikh districts, seems perhaps worthy of mention. It is chosen by opening the *Granth Sáhib* at random and taking the first letter of the first verse upon the page. If the page begins in the middle of a verse, the first letter of that verse is taken and the child's name must begin with the same letter.

CHAPTER II—ECONOMIC.

Section A.—Agriculture.

General conditions.

Area of cultivation.

(*a*) The area of the district is divided as follows :—

	Per cent.
Cultivated	69
Culturable waste	17
Government forests	4
Other unculturable waste	10

Soil classification.

The land under cultivation was classified as follows at the recent settlement, *viz.*—

(1) *Cháhi.*—All land watered regularly either from wells or from lifts other than lifts erected on the Lahore city drainage system. In case of doubt, if the land is shown by the *khasra girdáwari* to have been so irrigated in two or more out of the last eight harvests, it will be recorded as *cháhi*, provided that such land does not come within the definition of *cháhi-nahri*.

(2) *Nahri.*—Land regularly watered by any of the perennial or inundation canals of the district, *i.e.*, in two or more out of the last eight harvests, provided that such land does not come within the definition of *cháhi-nahri.*

(3) *Cháhi-nahri.*—Land regularly (*i.e.* in two or more of the last eight harvests) watered both by a perennial or inundation canal and by a well in the same harvest.

(4) *Abi.*—Land regularly watered by lifts on the City Drainage, Lahore Circle only.

(5 *Sailáb.*—Land usually flooded by the Rávi or Sutlej or its branches, or land near the river which is always moist.

(6) *Báráni.*—All cultivation not included in the above classes.

Soil distinctions.

The district being uniformly alluvial, the conditions of agriculture are little affected by geological considerations and depend almost entirely upon the conformation of the surface. Natural soil distinctions, though recognised by agriculturist (see below), are unimportant ; cultivation which relies on rain alone is

CHAPTER II—A. Agriculture. — Soil distinctions.

impossibly precarious and the capacity of the land almost entirely depends on its upland or lowland situation and its adaptability to artificial irrigation. The principal soils, under their local names, are as follows :—

Rohi —Is the name given not only to the main drainage channels of the district, such as the Hudiára, but to the low-lying land in which they run. The soil in these channels is stiff, containing little sand. It is fertile under irrigation and in a year of sufficient rainfall produces good crops without artificial irrigation. Otherwise the soil remains very dry and hard. Generally it is considered an advantage to have some of this Rohi land within an estate, but unless the slope of the channel is very gradual an untimely flood after the crops are sown causes the cultivators considerable loss.

Kallaráthi.—This is land impregnated with *kallar* or saline matter, but not sufficiently so to be completely unfertile.

Maira.—A loam of varying density and colour according to the proportion of sand mixed with it: found principally in the Mánjha, where it is in parts inclined to be gritty, but as a rule is a clean dry soil.

Tibba.—A weak soil in which sand and grit predominate enough to prevent clods forming under the action of moisture. It is only fit for the inferior pulses.

Dosháhi.—Intermediate between *Maira* and *Tibba*, often consisting of good fertile land covered by a slight coating of sand. This, though never bearing abundantly, is regarded as a very safe soil for dry cultivation. It bears best under regular and moderrate rain. Its upper surface closely resembles that of *Tibba*, and it is often called *Tibba* by the people who wish to belittle it with a view to the coming assessment. This soil is hardly found except in the eastern portion of the Kasúr Mánjha.

Gasra.—A soft grey alluvial loam found in the river tracts. Sometimes the term is also used of sandy *Maira*. *Gasra* is easy to work and fairly fertile.

Sukkand.—A hard alluvial soil just the opposite of *Gasra*. The term is used to denote land of a dark colour which splits into fissures when drying after irrigation, it usually has a substratum of pure sand not far below: provided the sand is not too near, *Sukkand* bears well if properly cultivated, but it requires plenty of irrigation and heavy plough cattle. On this account it is not so well liked by the people as *Gasra*.

CHAPTER II.—A.

Agriculture.

Soil distinctions.

Sterile soils.—The two best terms are *Rakkar* and *Kallar.* The former is a bad sandy land in river tracts fit for growing nothing but *sirkána* (thatch reed), but sometimes the people when they wish to disparage their cultivated land even talk of it as *Rakkar*.

The worst kind of *kallar* is found along the river bank, where the only indication of its presence is the absence of all vegetation. The commoner and milder form is seen in the west Mánjha along the Rávi bank where in places a thick crust of *reh* forms.

System of cultivation—Sowing.

(*b*) Sowing is done either by drill (*puri*) or broadcast (*chhaṭah*). The latter is the favourite method for wheat, though late sowings are usually broadcast. Gram is generally sown by drill, but considerable *wadh watar* sowings are now made broadcast. When the seed is very small it is sometimes mixed with earth before being sown, as otherwise it would be difficult to distribute it evenly : cotton seeds are smeared together to prevent them from sticking together. Some crops are grown from seedings (*paníri*) raised in nurseries, such as tobacco, chillies, onions, and rice generally.

Ploughing.

The general name for plough in this district is *hal,* but the people recognise the distinction between the *hal* plough and the *munna* plough here as in other districts. The latter is the heavier kind of the two and is used chiefly in the Mánjha tract, the *hal* being reserved for the lowlands. They are both made almost entirely of wood, the ploughshare being the only solid iron ; but the joints of wood are strengthened with iron fastenings. Altogether the *hal* has about three *sers* of iron in it and the *munna* somewhat more. The *munna* makes a deeper and broader furrow than the *hal* and requires heavier oxen. This perhaps is the chief reason why it is confined chiefly to the Mánjha, where alone in this district heavy oxen are to be found. The *hal* goes in the soil about 3 inches the first time of ploughing, 5 inches the second, and 7 or 8 inches the third. A *munna* plough may go deeper. The people recognise the value of deep ploughing, but say they cannot afford the cattle. A plough can do 4 to 5 *kanals* a day on the first ploughing and three *kanáls* on the second. When the land has been ploughed once, the second time it is ploughed crossways.

The field may be ploughed in sections up and down or in the case of drill sowing in narrowing circles, beginning round the edge of the field. If the cultivators can manage it three or four ploughs work at a time, each following the other, but in a different furrow. They recognise the value of frequent plough-

CHAPTER II.—A.

Agriculture.

Ploughing.

ing and of having all the soil exposed to the air turn and turn about, but they do not often find leisure either to plough the land as often as they should or to begin ploughing early enough in the season to give the soil a fair chance. No ploughing is done unless the ground has been first moistened by rain or by artificial irrigation. The former does not always come, and the cultivators cannot find leisure for the latter. At the end just before sowing they are rushed for time and scamp the ploughing to the future detriment of the crop.

Rolling.

After ploughing the land is usually smoothed down with a heavy squared beam called *sohága*, dragged by one or two pairs of bullocks, the drivers of which stand on the beam. This is partly to break clods and pulverise the soil and partly to consolidate the surface with a view to the retention of the moisture in the soil. Generally in irrigated land for all crops but gram, each ploughing is followed by a rolling with the *sohága*. Unirrigated land should always be rolled as soon as it is ploughed, otherwise the moisture (*watar*), on the strength of which the ploughing was done, will be lost to the soil: and the seed when sown will not germinate. Neglect to carry out this precaution results in much of the field sown lying completely bare for the rest of the season. As a matter of practice rolling is, as a rule, done once or twice in land under preparation for *rabi* sowings except river flooded land which is seldom rolled for any crop but wheat. But unirrigated land intended for autumn sowings other than cotton is seldom rolled for want of leisure; the ploughing even on such land is very restricted. The summer rains on which such dry cultivation depends last a short time only, and the chief object is to get in the seed as early as possible after the rainy season has begun. For dry cotton sowings the land is often ploughed first as early as February or even January, and consequently a rolling to follow is indispensable if the soil is to be kept moist. After the sowings are done, the land may be ploughed and rolled once more to cover over and press down the seed.

Forming *kiydras*.

The last operation of all while the seed is still under the ground is to divide the land for greater convenience of irrigation into small *kiyáras*, by means of ridges of earth raised by two men working at the instrument known as the *jandra*, which is a large wooden rake: one man holds the handle and the other pulls a string attached to the handle at its lower end where it joins the rake. These *kiyáras* are never more than one-eighth or one-tenth of an acre, and often are much less.

CHAPTER II.—A.

Agriculture.

Weeding.

Weeding (known as *godi-choki*) is carried out more or less carefully on well lands for the autumn crops, especially when the cultivators are Aráins, Kambohs or Labánas. Wheat is never weeded notwithstanding the rapid growth of the onion weed known as *phugát* or *piyázi*. The weeding instrument in use is the *amba* or trowel: under special conditions weeding is sometimes done by running a light plough between the rows of sugarcane or maize or cotton. The crops which are most weeded in this district are sugarcane, chillies and maize. It is exceptional for weeding to be done on any soil but that under well irrigation. It is of course equally necessary and sometimes more so on canal-irrigated land, but the cultivators do not seem able to find the time or energy. River flooded land requires more weeding than any other, to get rid of the thistles that spring up after ploughings and choke the rising crop: there, however, weeding is seldom or never done.

Manuring.

Canal-irrigated land does not receive as much manure as the well lands. The village stocks of manure are generally used to the full, but the well-irrigated lands always some first. *Kallar* is sometimes used as a top-dressing, but only for valuable lands near Lahore. More commonly sites which produce it are leased to contractors for the manufacture of saltpetre. Lands under river action are never manured, partly owing to the alluvial deposit, partly because the manure would be swept away by the floods. *Báráni* lands, too, are not manured.

Naturally the area manured depends upon the means of the cultivator, the cattle he possesses and the amount of manure he can obtain from the sweepings of his house. The principal manure is that of the farm yard, but as the droppings of cattle are largely needed for fuel, the fields do not get all these: also in well-irrigated tracts the cattle are very poorly fed for most of the year, so that the supply at the best would be small compared with the amount of live-stock. The manure available for cultivation is collected in heaps outside the village settlement. Each shareholder knows his own heap. Every morning the cattle droppings, not appropriated to make fuel cakes, are carried out with the other house sweepings and refuse litter, and thrown on to the house heap. The refuse of non-proprietors' houses is either collected in a common heap which is divided among the shareholders at intervals, or if the non-proprietors have been divided off among different proprietors, they put their refuse on the heaps of their respective patrons. Little care, however, is exercised in collecting manure and much more might be accumulated if the people would pay

CHAPTER II.—A.

Agriculture.

Manuring.

a little more attention to the cleanliness of their homes, of the village street-ways, and the vicinity of their homesteads. Leaves are not swept up and rags of all sorts disfigure the ground. Bones are allowed to be taken off by sweepers for the mere trouble of collecting them: the sweepers make a fair profit by selling them for export to bone dealers at Lahore. Large cart loads of these may often be seen making their way to the city.

From the manure heaps round the village, manure is carted to the land as it is required. Also there are contributions usually collected at the wells where the working cattle stand for a good part of the year. The crop which is always heavily manured is maize, and on the manure laid down for it a second crop, usually fodder but sometimes wheat, follows the maize. Cane, chillies, tobacco and all sorts of vegetables other than melons only do well in manured land. Rice sometimes requires manure if the soil is hard and stiff. Wheat is never manured in this district and cotton seldom. The early *haru chari* should have some manure: other *jawár* wants none. The fields close to the homestead are fertilised naturally by the visits of the population, and if the land so benefitted is under cultivation, it is known as *niain* or *gori* land. Sometimes, however, the breezy expanse of the village common is preferred for operations of nature, and that is nearly always waste land. The manure described above is thrown down on the land in amounts varying from forty to one hundred maunds an acre as far as one can judge from the the different accounts given, and it is then ploughed into the soil. Another method of manuring is by throwing topdressing over the crops when they are about a foot high. The dressing consists either of pulverised manure or of *kallar*. Tobacco and sugarcane, and if the cultivation is very good such as is found in Aráin villages near Lahore, cotton and wheat are treated in this way.

The proportion of the land which is manured appears to be about 10 per cent. All irrigated maize, all land under tobacco, sugarcane, chillies, vegetables, some cotton and about 5 per cent. of the wheat is manured. This gives, very roughly, the following figures:—

Maize	... 3 per cent. of the whole area.
Sugarcane	... 1 " " " "
Vegetables, &c.	... 3 " " " "
Wheat	... 2 " " " "
Cotton, rice, &c.	... 1 " " " "
Total	10 " " " "

CHAPTER II.—A.

Agriculture.

Carts.

Manure is carried from the village to the fields or from one village to another in carts (*gaddi*). Carts are also used for the carriage of grain; for this purpose, however, donkeys too are used and, more rarely, camels; the former carrying from $1\frac{1}{2}$ to 2, the latter from 6 to 8 maunds. The village cart consists of a triangular framework on wheels, the framework being about twelve feet long and four feet broad behind, but tapering to a point in front. This is the important part of the cart, and there lie any points of superiority one cart may have over another. The platform is known as the *gadh* and is made of the strongest wood, *shísham*; its strength varies with the quantity and quality of iron working about it. The carts used in the Mánjha are much stronger than those made for the Hithár. Improvement of agriculture and extension of railways have largely superseded cart hire as a means of livelihood, but still there are villages near Lahore and near the metalled roads everywhere from which carts are constantly let out on hire. Apart from this, however, the Mánjha carts have to carry fodder and manure greater distances than the Hithár carts and should be stronger for this reason alone. An ordinary Hithár cart costs about Rs. 70 to Rs. 80; an ordinary Mánjha cart Rs. 100 to Rs. 120. Finer carts cost more. One pair of bullocks is the usual number, but for a load over 20 maunds over an unmetalled road two pairs would be necessary. The framework of the cart is fitted at its edge all round with a number of uprights, which are laced together with ropes: sometimes these are fitted with cross bars over which a blanket, coarse sacking, or a movable thatch made of light *sirki* can be stretched if necessary. Covered carts, however, of this kind are not easy to procure from the villages when required in wet weather. The animals accustomed to draw these carts are inferior, the best bullocks in the Mánjha being kept at work in the fields.

Fencing.

Some sort of fencing is generally put up to protect fields which adjoin a frequented road or open space near the village. Similarly the chief paths near the well, leading to and from the well, are fenced on either side. The fences are made of boughs of trees, bushes or anything that comes handy. Important crops like sugarcane are surrounded with hemp plants planted in a single row for the protection of the cane. Reed screens are erected to shelter crops from wind and sand.

Watching.

Maize and *jawár* always require to be watched during the day while the grain is ripening, otherwise crowds of birds would collect and spoil the crop. The watchman sits on a high platform called the *manna* which is raised on four stakes some

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Watching.

ten or twelve feet from the ground : he is armed with a *khubáni* with which he slings mud pellets, made by himself, at the birds. Near *rakhs* a watch over many crops, particularly sugarcane and maize, has to be maintained at night against pig and jackal. The watchman here walks about all night armed with a spear, and cracking a long whip or making discordant yells. Sometimes owners of adjoining lands club together to pay one or more common watchman, and it is not unusual for them to agree together as to what lands shall be sown with what crops, so as to facilitate arrangements for sharing the expense of such watchmen as may be found necessary, but as a rule for maize or sugarcane, to which very close attention must be given, each house provides its own watchman. Scare-crows are sometimes used to frighten away birds and are put up in various shapes.

Reaping.

Except cotton, pepper and poppy which are picked by hand, all other crops are reaped with the *dátri* or sickle. It is no easy work as the stooping or squatting position combined with an advancing motion becomes very laborious after a little time and both hands are employed, one holding the sickle and the other the stuff to be cut. The work therefore is only fit for able bodied men : women and children, however, can help in tying up the sheaves in villages where custom permits women to work in the field. Ordinarily the autumn harvesting is done by the cultivators themselves assisted by village menials. The *rabi* crop, however, in tracts extensively irrigated from well or canal is more than the villagers can manage by themselves if the harvest is to be finished within a reasonable time. Much of the wheat reaping therefore is made over to hired reapers or *láwas* who are paid in kind, being allowed to carry off a shock of wheat each evening. The *láwa* can cut on the average about two *kanáls* in a day and the shock weighs about one maund yielding 10 or 12 *sers* of grain when threshed, so that this charge comes to about one maund of grain for each acre cut.

Threshing.

When the reaping is done the stuff is collected near the threshing floor, which is a circular piece of ground pressed down hard and firm, and carefully cleaned : the site of the threshing floor is selected to suit the holding : generally each well has its separate floor and the cultivating shareholders thresh in turn : a stake is driven into the ground in the centre of the floor ; the crop to be threshed is placed around the stake, to which one or more yoke of cattle are fastened by a rope : sometimes three or four bullocks or buffaloes are driven in a row. To them is yoked a rectangular handle made of pieces of wood tied together which covered with straw and weighted with clods of earth or other

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heavy substance that comes in handy. The cattle are muzzled as a rule; each row requires a driver, and another man is needed to put back the straw which gets out of the track of the cattle. The handle is called a *phál* ʻ. It is always used for threshing wheat or wheat and gram mixed. Other crops are often threshed without the *phála*, the trampling of the oxen being sufficient to separate the grain from the sheath. Maize and *jawár* heads are usually beaten out with sticks, the maize cobs having been first picked out of the sheath by hand. Rice is generally beaten against the edge of a circular hole in the ground. *Moth* and some few other grains are beaten out with a pitchfork.

Winnowing.

When the grain has been separated and the straw thoroughly broken, the stuff is tossed up into the air with a pitchfork and then further cleaning is done by shaking the grain and chaff still left mixed in a winnowing basket (*chajj*) held up aloft in a man's hands above his head to catch the breeze. In the month of May when the spring crops are being harvested there is generally a hot wind blowing at some part of the day which helps the process, and the hotter and fiercer the wind the sooner the harvesting is over.

The following table shows approximately the normal times of sowing and reaping of the principal crops of the district:—

Harvest	Crop.	Sowing.		Harvesting.		Storing.	
		From	To	From	To	From	To
Kharif.	Rice ...	25th April.	14th August.	20th October.	8th November.	1st November.	15th November.
	Cotton ...	1st March.	25th April.	9th October.	13th December.	Do.	31st December.
	Mung and *másh*	5th August.	20th August.	5th November.	20th November.	15th November.	5th December.
	Moth and other pulses.	2nd July.	15th July.	25th October.	9th November.	Do.	Do.
	Sugarcane ...	12th March.	5th April.	9th October.	13th December.	1st November.	31st January.
	Sarson ...	10th September.	10th October.	14th March.	19th April.	10th April.	15th May.
	Toria ...	8th September.	19th September.	4th December.	31st December.	15th December.	10th January.
Rabi.	Wheat ...	25th October.	13th December.	15th April.	28th April.	5th May.	15th June.
	Barley ...	Do.	29th November.	6th April.	12th April.	25th April.	15th May.
	Gram ...	10th September.	10th October.	28th March.	5th April.	10th April	5th June.

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(c) The following table taken from the Census Report, 1911, shows the distribution of the population who live by pasture and agriculture :—

Population engaged in and dependent upon agriculture.

	Total workers and dependants.	ACTUAL WORKERS.		Dependants.
		Males.	Females.	
1. Income from rent of agricultural land ...	22,419	6,985	2,400	1,3034
2. Ordinary cultivators	347,910	115,969	1,455	230,486
3. Agents, Managers of Land Estates, &c....	68	25	...	43
4. Farm servants and field labourers ...	94,284	31,695	5,384	57,205
5. Tea, coffee, chinchona and indigo plantation.	...	...	...	...
6. Fruit, flower, vegetable, betel, vine, cocoanut, &c., growers.	1,854	400	17	1,437
7. Forest Officers, Rangers and Guards ...	650	277	...	373
8. Wood cutters, firewood, lac, &c. ...	3,111	1,547	19	1,545
9. Cattle and buffalo breeders and keepers ...	1,523	505	8	1,010
10. Sheep, goat and pig breeders ...	733	561	...	172
11. Breeders of other animals	3	3	...	...
12. Herdsmen, shepherds, goatherds, &c. ...	9,164	6,381	20	2,763
13. Raisers of birds, bees, silkworms, &c. ...	6	2	...	4
TOTAL ...	481,725	164,350	9,303	308,072

Of the total of actual workers 1,131 males and 4 females are classed as only partly agricultural.

The proportion of agricultural workers and dependants to the whole population of the district is 46·5 per cent., while the proportion of the whole province is 59·9 per cent. The disparity is to a great extent due to the large urban population of Lahore. The chief agricultural tribes in the district are shown in Table 15. Some of the menial castes also do some cultivation. A full account of these tribes is to be found in Chapter I, Section C(*m*).

Agricultural labourers.

Daily labour is little required in this district except at harvest time, and it is then mostly supplied by the menial classes. Agricultural labourers in the Western sense of the word are however not unknown. They are drawn from the landless men of the agricultural tribes and paid at the rate of from 6 to 8 annas a day.

With reference to the employment of the menials at harvest time the following extract is from the recent Assessment Report of the Lahore *tahsíl* :—

"Whether hired reapers (*láwa*) are employed or not to assist in harvesting depends on a variety of considerations, *viz.*, the proportions of the total area which is farmed by the owner himself, the size of his holding, the number of able-bodied members available within his family circle, and even the tribal tradition of industry, or the reverse. Where such hired labour is employed it is paid by universal custom from the gross produce ; the result of my enquiries

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has been to show that hired labour is employed as a general rule except in the Lahore Circle, though the extent to which it is engaged varies. The crops thus reaped are in all circles, wheat, gram, barley and rice."

Agricultural labourers.

The reaper is usually allowed one sheaf out of the ten or twelve sheaves of wheat, gram or barley, the cutting of which is reckoned as one day's work. The dues for rice vary. In the Riverain Circles of the Lahore *tahsíl* they amount to 3 seers, in the Hithár and Dabh circles of the Chúnián *tahsíl* to 2½ seers, and in Mánjha Mitha, Mánjha Khara and Bet Bangar circles of the Kasúr *tahsíl* to 8 seers per maund. Fuller details will be found in paragraph 50 of each of the Assessment Reports.

Principal crops.

(*d*) The following table gives the percentage of the area harvested under each of the principal crops on the total crops harvested :—

Harvest.	Crop.	Lahore.	Kasúr.	Chúnián.	District.
Kharif ...	Rice	3	1	2	2
	Jowár	...	...	...	...
	Bájra	2	2	1	2
	Other cereals	4	4	3	3
	Mung and *másh* ...	...	...	1	...
	Peas, *moth* and other pulses	2	1	2	2
	Sugarcane	1	1	1	1
	Cotton	12	13	14	13
	Others	4	4	3	4
	TOTAL ...	28	26	27	27
Rabi ..	Wheat	39	41	41	40
	Barley	1	1	2	2
	Gram	19	18	18	18
	Oilseeds	4	5	5	5
	Others	9	9	7	8
	TOTAL ...	72	74	73	73
	GRAND TOTAL ...	100	100	100	100

Wheat is by so far the most important staple that it amounts to two-fifths of the total crops grown; it is frequently sown

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mixed with gram, resisting drought better so than when growing alone. Gram comes next to wheat in importance, and after gram, cotton and oilseeds, of which *toria*, usually grown with the help of canal irrigation, is the most valuable variety. Maize is an important food-grain. Rice has little importance, except in the Lahore *tahsíl*. Of the numerous fodder crops, *chari* (great millet) grown in the *kharíf*, is the most noteworthy. The spring harvest accounts for considerably more than two-thirds of the total cropping. Out of the total cultivated area of 1911-12 of the district 1,194,194 acres, of which 902,492 acres are artificially irrigated, 146,407 acres, or 12 per cent., fail and 1,067,152 acres mature. Thus in each 100 acres of cultivation about 89 acres of crops are raised.

Average outturn.

The average outturns in lbs. per acre of the principal crops, as estimated by the Director of Land Records for the period 1907-08 to 1911-12, are in the following table set out and compared with the Provincial average :—

—	Provincial average.		Lahore District.	
	Irrigated.	Unirrigated.	Irrigated.	Unirrigated.
Rice	832	838	782	474
Wheat	960	520	898	555
Barley	1,060	620	1,018	592
Jowár	520	320	488	381
Bájra	560	320	521	365
Maize	1,100	480	1,112	766
Gram	580	560	625	534
Rapeseed	500	350	498	330
Sugarcane	1,700	1,000	1,748	1,467
Cotton (cleaned)	132	72	126	95

Description of the main crops—Wheat (*kanak*, *Triticum æstivum*).

The following is a description of the main crops :—

The most important varieties of wheat now grown in the district are *ghoni*, *dudhi*, *lál kisáránwáli* and *khabar*. *Ghoni* is of two varieties, the one has a soft long staple, long thin ear, and long-pointed leaves. Its stalk is very thin and firm, and its advantage is that it matures early ; the other, termed *makki*, is a small strong plant with broad leaves and small broad ears, and

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Wheat (*kanak*, (*Triticum æstivum*).

tillers plentifully. *Dudhi* is a bearded wheat which yields a good *búhsa*, but is not so good for grain. *Lál kisáránwáli*, so called from the colour of its hairs, is a new bearded variety which has been introduced of recent years in the Colony. It is soft and white, and is in great demand. *Khabar* is red, hard and bearded. It is not very common, but is found on barren lands, where it is prized for its drought-resisting qualities. The Hithár *gasra* soil under irrigation is perhaps better suited to the fine quality of wheat than any other in the district although it does not bear such heavy crops as the Mánjha soil. However, being very soft, it gives much encouragement to the onion weed known as *phukla* or *phughát* which comes up with the wheat and often chokes it. This weed is very easily pulled up by the roots, but where it appears it always seems to get the better of the cultivators. Land intended for irrigated wheat ought to be ploughed six or seven times, but the cultivators seldom find leisure to plough more than three, four or, at the most, five times. It is only when rain has been falling occasionally throughout the summer that the full complement of ploughings is attained. Not seldom on canal land and sometimes even in the case of well lands the first irrigation for commencing ploughing is put off and off in the hope that rain will fall, until the people have no leisure but to irrigate, plough once, sow the seed and then plough over the land once more. This is called *uppar karna* and the wheat yield produced by sketchy a process is usually poor. As a rule one may say that in this district far too little ploughing is done for wheat. Irrigated wheat is seldom sown in land that has just borne another crop, except that well land copiously manured for maize is again sown with wheat immediately following the maize on the strength of the manuring. Sometimes on canal lands cotton will follow wheat, but, if wheat is to follow cotton, it means that the land must be fallow from the end of December, when the cotton pickings are over, till the end of October, when the wheat sowings begin. Ordinarily wheat sowings on irrigated land continue through November to the middle of December; then they must stop. If intended for fodder the wheat is sown earlier mixed with some fodder crop. On unirrigated land in this district, contrary to the usual custom, wheat is sown by itself except in *nálas* or depressions of the surface, such as occur frequently in the Hithár, where wheat is sown often mixed with gram or barley. The time for sowing this crop dry is in the months of September and October while the soil is still moist after the late autumn rains. On the other hand a shower of rain soon after sowings is apt to do much harm, beating down the surface so that the seed cannot emerge. This incrustation is called

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Wheat (*kanak, Triticum æstivum*).

karand. Under dry cultivation the amount of seed sown is much less than for irrigated, and the sowing is usually done by drill. Some excellent wheat is grown in the river inundated lowlands of the Rávi Bet. As the wheat is cut it is put up in small sheaves; before threshing operations commence the sheaves are heaped up close to the threshing floor. When the grain is cleaned it is taken off on carts or on donkeys to the village, where it is stored for household use or for sale. The people usually keep what they require for themselves and make over the rest either to money-lenders of the village in satisfaction for their debts, or to traders who have come to buy for export. In the chief wheat tracts however the crop is often sold while still standing to agents of the large exporting firms. The broken straw or *bhúsa* of wheat is generally stacked under a neatly plastered thatching which preserves it against the wind and rain. This is the main dry fodder for the plough and well cattle during the year. The *bhúsa* is raked out as required through a small hole made at the foot of the stack. It is usually given to the cattle mixed with green fodder crops, if any of the latter are available. Wheat suffers chiefly from rust (*kungi*) which is an insect pest, and from smut (*kangiári*) which is a parasite.

Gram (*chole, Cicer arietinum*).

Gram is the next important crop. It has three varieties, "red," "black" and "yellow." 'Yellow' is considered the best for *dál* and 'red' for horse fodder.

Of late gram has been rising in importance, and its cultivation is no longer confined to *báráni* lands, but it is freely grown on canal lands also, either after the land has been watered, or upon the moisture left by a *kharíf* crop of rice, *jawár* or maize. It is sometimes grown mixed with *toria*, and sometimes with wheat. In the former case it gets irrigation until the *toria* is cut but not afterwards. In *báráni* lands it is nearly always drill sown, but where it is sown in the rice or *jowár* moisture, it is sown broadcast. When the seed has once germinated gram is a hardy crop, and stands a prolonged drought fairly well, but is subject to injury from frost at the end of January or beginning of February and from the strong March wind known as *bulla*, unless there has been some winter rain. If the weather continue cloudy and unsettled at the end of March when the gram should be forming, there is a risk of total failure. The people too assert that lightning injures the crop at this stage, but it is the hail accompanied by thunder and lightning and the cold which actually kill it. If it is protected by being mixed with another crop it will not die so easily. Gram is eaten by men at all times of the year, either dry and whole, or in the form of *dál*; if it has been sown mixed with wheat, they do not trouble to separate the

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two but eat them together. For sale purposes the wheat and gram are separated. When the crop is quite young, the people pull the top leaves and after cooking them in water eat them with bread as herbs. Also they graze their cattle on the crop up to December with the object of preventing it from coming on too soon. Well-to-do men have been known to turn in their horses to graze even after the pulse has formed, or sometimes the gram is cut green for horses in March. The crop is harvested generally about the beginning of April.

Maize (*makki*, *Zea mays*).

The kinds of maize most grown at present are *Doában*, a variety of American origin probably imported from Jullundur; *Sufaida* a large early, and *Kunj*, a small late variety. Maize is grown to a slight extent in river flooded lands; otherwise it is never grown in this district without irrigation, and it does better on wells than canal irrigation, the crop being very sensitive to over-watering. Maize is sown early in August. A month or more before sowing time, or earlier, if possible, ploughings commence, the land being first irrigated unless there has been a timely fall of rain. Manuring is done either before ploughing or immediately after; the amount of manure varies greatly. In highly farmed land not less than one hundred maunds per acre are put down; and all the people, if asked, profess to use as much, but as a matter of fact they cannot spare this amount in rural tracts. Forty or fifty maunds would be nearer the mark. The land is ploughed in all five or six times before sowing and oftener if possible: after every other ploughing at the least the ground should be carefully rolled (*sohága*). Then the seed is sown broadcast or more rarely by dribbling from the hand, about eighteen *sers* to the acre. After sowing they plough and level the land once or twice again. When the crop is about half a foot out of the ground, they weed it and then give it the first watering. After that the crop should be irrigated every seventh or eighth day unless good rain falls. A second weeding is done when the crop is a foot and a half high. The cultivators either weed their own fields or employ hired labour at eight annas a day or Rs. 2-8-0 an acre. While the crop is ripening all the plants that do not promise well are plucked out and given to the cattle. Maize has a good many enemies to contend with before it comes to maturity. When the stock is foot or a foot and a half high the top is often attacked by a sort of a blight (*kírí*) which either produces complete failure of the crop or reduces the yield greatly. Also while the crop is still quite young its roots are sometimes eaten by white ants, in which case all the plants affected are certain to dry up. The only remedy is weeding and watering. A little before the grain ripens a caterpillar (*sundi*) sometimes forms in

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Maize (*makki, Zea mays*).

it and totally destroys the cobs. This pest does not necessarily attack all the crop but only parts here and there. The worst enemies, however, of maize in this district, next perhaps to blight (*kíri*) are pig and jackal. The former will travel several miles at night after a maize crop. They tear up the roots and eat off the heads. Jackals and village dogs as well eat the grain without injuring the stalks or roots. In the day time the crop is very subject to depredations by birds of various kinds. For the first ten or twelve days after sowing a strict watch has to be maintained in the day time to keep the birds from grubbing up the seed, and when the crop is ripening it is patrolled by night and day. Generally the *zamíndárs* or their childern perform this duty themselves, sometimes they retain paid watchmen at various wages varying from 2 to 5 rupees a month. When the grain is ripe it is reaped with the cobs still on and left to dry on the ground for three or four days, after which it is piled together in a stack in the field : it stands like this for a week or so, after which the cobs are picked off by hand. This is called *chhilai* and is generally done by women sitting down who get one *ser* in the maund for their trouble. Threshing of maize is done with sticks either by members of the family or by labourers who get as pay two *sers* per maund of grain cleaned. Maize is the food of people in the winter months. It is therefore seldom sold.

Rice (*Jhona, Oryza sativa.*)

Rice is grown chiefly by aid of canal irrigation in the Mánjha and Hithár tracts and very little by well irrigation. The methods of cultivation vary in different parts of the district, but generally the land to be sown is ploughed three or four times and rolled after each ploughing; at the last two ploughings the land should have water standing on it a foot deep. The land must always be manured if it is inclined to be hard or poor in soil, as in the Chúnián Hithár. In the Mánjha, where the soil is soft and good, manure is not always used. When the ground is ready the rice plants are put in or the seed is sown broadcast after being soaked in water. The former method is the safest and produces better results but cannot always be followed for want of time. The young rice plants are grown at the irrigation wells in small plots which are sown at end of April in land that has been first carefully cleaned, ploughed and manured. The young plants are ready for transplanting about a month after sowing, being then about one foot high. The planting out is generally done by hired labourers; *Changars* and *Purbias* are employed. They are usually paid in kind, but sometimes in cash at Rs. 2-8-0 per acre. The kind payments are made in wheat, this being the only crop available at the time. After being

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Rice (*jhona*, *Oryza sativa*).

planted or sown the rice must be irrigated sufficiently to keep the soil in a constant state of saturation, and weeding must be done now and then. Rice is the most sensitive crop to drought and is brought to maturity with difficulty in the Hithár, where the inundation canals may cease running as early as September. In that tract no rice is really safe unless it is covered by an irrigation well. The area of matured rice is very apt to be over-estimated, because the *patwári* makes his record in October and the rice crop is not harvested much before November : in the intervening days much of the area recorded as matured may have dried up unless a full supply of water was available. When ripe also the grain is very loose, and in estimating the yield allowance must be made for the grain dropped during harvesting. After being cut the rice is usually threshed out by hand, the labourer bringing the sheaf down on the edge of a small clay trough. For this hired menials receive payment in kind amounting to 2 to 2½ seers per maund of the crop sown. It is husked by steam-driven machines or in the more backward places by being pounded either by hand or by lever in a large hole in the ground paved with stone. The rice husks are burnt or thrown away as refuse. The straw of rice is used principally as litter for horses and cattle. It is also given to cattle as fodder, but for this purpose it is not good, being very soft and devoid of strengthening properties. The names for rice in this district are *munji* and *jhona*, the latter being more common Cis-Indus. The kinds of rice at present most in vogue are *ratua*, a red rice of good quality which ripens some 15 days earlier than the other varieties ; *sufaida*, a beardless white kind which gives a heavy outturn, if inferior to *ratua* and *soni pattar*, a yellow variety.

Barley (*jao*, *Hordeum, hexastichum*).

Barley is a much hardier crop than wheat, can grow in worse land, requires less irrigation, and ripens earlier. It is less popular now than heretofore, the European demand for it having only lately arisen. Usually on wells barley is sown at the furthest part available to which the irrigation can be expected to reach, all the nearer land being kept for wheat. It is however occasionally sown on good soils in the neighbourhood of villages and on small areas to supply food-grain early in the season long before wheat matures. The outturn of barley weighs somewhat lighter than that of wheat. Irrigated barley is cut green for fodder, if necessary, indifferently with wheat. Unirrigated barley is generally sown with gram or wheat in lowlying depressions of land. Especially in alluvial tracts, if the soil is not good, gram and barley are usually mixed under the name of *goji*.

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Jawár (*Sorghum vulgare*).

Jawár is grown on irrigated and unirrigated soils; on the former it is more generally intended for cattle fodder (*chari*) though not always: in the Hithár one or two acres of *jawár* to each well are sown exclusively for the grain, though the stalks of course come in useful for the cattle. At the sowings 3 or 4 *sérs* a *kanál* will be thrown down if the crop is meant to be used as fodder and one and a half or two *sérs* if it is to be ripened as a grain crop. But if in the latter case the crop turn out badly then the best heads are picked out, and the rest left standing for the cattle. The fodder *jawár* crops are cut green as required, and if any of it is still standing when the grain is ripe the cattle are turned in to feed on it. A fair amount of irrigated *chari jawár* is sown in May under the name of *haru*: for this the land is manured as heavily as for maize, and water is given every fourth or fifth day. This is ready for use in July; also *babul moth*, which is sown at the same time as the *haru*, sometimes with it, sometimes separate: more *babul moth* than *haru* is grown in the Mánjha and *vice versá* in the Hithár. In July again both *chari* and grain *jawár* are sown. The *chari* then sown is ready for use in September and October; and the grain ripens in the latter month. Manure is not used for this second crop, nor does it require so much irrigation as the *haru*; it is often sown on the higher lands under irrigation. As an unirrigated crop *jawár* is generally sown as a food-grain, but may come in useful for either purpose: and the crop that is not a success is left to serve as fodder. After a favourable autumn harvest, large areas of *jawár* may be seen standing, the cultivators having been too busy over other matters to cut it down. *Jawár* is sown dry either by itself or mixed with *moth*, more often the former in this district. Sowing usually takes place in July and reapings in October. When the crop is ripe it is cut down and stacked; after a time the heads are cut off and beaten or trodden to separate the grain. The stalks are left in the field for a time to dry and then piled on the roofs of houses and other dry places to be used as fodder during the early winter months. *Jawár* stalks are known as *tándas*: they are looked on as excellent fodder. If fodder is plentiful, the stalks are thrown down whole and the cattle eat half, leaving the harder ends. If fodder is scarce, the stalks are chopped up small and given to the cattle mixed with other kinds of fodder. This makes the *jawár* stalks go further than when they are given whole. The *jawár* heads are attacked sometimes by "smut," known as *kangiári*, especially if the summer rainfall has been excessive: other diseases detrimental to this crop are *tela* and *kíri* which exhaust all the juice of the plant and dry it up. Birds devastate the *jawár* crops which are usually watched by a bird-

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Jawár (Sorghum vulgare).

scarer from a platform known as the *manna* erected in a central position among the *jawár* crops. *Jawár* again is eaten in the form of bread to the same extent as maize, generally at the morning meal with the *ság* of the rape seed as a condiment, but has been largely supplanted by wheat as the staple food of the people.

Pulses (*Moth, Phaseolus aconitifolius; Mash, Phaseolus radiatus; Mung, Phaseolus mungo*).

The pulses mentioned in this paragraph are much less grown now than twenty years ago; their chief use is now for fodder, the necessity for which is to some extent discounted by increased canal-irrigation. *Moth* and *másh* are the principal pulses. *Mung* is not much cultivated in this district. The only form of irrigated *moth* in this district is that termed *babul moth*, sown in May along with the early *haru chari*. Unirrigated *moth* is raised chiefly in light sandy soil and only requires very moderate rain; consequently the *moth* cropping may be fairly successful though the *jawár* crop fail through want of sufficient moisture. The grain enters into the food of the people, being sometimes eaten with the evening meal in the form of *dál*. The straw is known as *missa bhúsa* and is much valued for cattle fodder. The times of sowing and reaping *moth* are the same as for unirrigated *jawár*, and the same degree of cultivation is required, namely two or three ploughings at the most. *Másh* is far the more valuable of the two pulses, being much prized for the excellent *dál* it makes; it comes in very palatable at the summer evening meal. It requires a fairly stiff soil with a good deal of moisture; it is grown largely in the alluvial lands of the Sutlej, where its cultivation is exceedingly rough and sketchy. So careless and perfunctory is the ploughing that once the crop is removed it would be hard to say whether the land be fallow or old waste. The straw of this crop also is useful as fodder. If *másh* matures well and is successfully harvested, it gives as good a return on as little expenditure of time or trouble as any crop. It is, however, very sensitive both to drought and over-flooding; there is on this account much loss and waste of *másh* seed each year. *Moth, mung* and *másh* are *kharíf* crops; *masar* belongs to the *rabi*.

Lentil (*Masar, Ervum lens*).

It is grown on the river side in the cold season, comes up and ripens very quickly and requires very little tillage. Thus it can be grown on land from which the annual inundation does not subside early enough for the cultivation of cereals. In fact it takes the same place in the spring sowings as *másh* does in the autumn. It is often sown with gram or barley on river lands. The pulse is used for making *dál*.

Oilseeds (*Toria, Brassica juncea*).

Toria is now the most popular of the oilseeds in the upland tracts, where it is invariably canal irrigated. There is a large European demand for oilseeds, which command good prices.

CHAPTER II.—A. — Agriculture. — Oilseeds (*Toria, Brassica juncea*).

Toria is a paying crop, does not require much water and only occupies the ground for about 2½ months, coming almost between the *kharíf* and *rabi* harvests. It is sown from the 8th to the 19th September and cut between the 4th and the 31st of December.

Táramíra is a crop which is sown dry in the autumn along with another crop such as *moth* or *chari* and is harvested in the spring. It can be sown late in the autumn; thus large areas of it are sure to be sown when the winter rains commence early. It does fairly well in an inferior soil, and, as the *til* crop may be accepted as an indication of loose sandy ground, so *táramíra* may generally be found where the soil is too thin to do justice to the crops. On the ground its plants appear very scattered and far apart, which fact gives the impression that much of the crop has failed. As a matter of fact the bare places are those from which the autumn crop has been harvested. *Táramíra* is often cut early for fodder. On well lands *táramíra* is sometimes found growing up with the fodder wheat.

Rape (*Sarson, Brassica campestris*).

Rape is grown principally in the Mánjha either under canal irrigation or under dry cultivation. In the former case it is usually sown by itself; in the latter it is more commonly sown among the gram in rows eight or ten feet apart at right angles to the gram lines. Much of it is plucked up unripe for fodder or for use as *ság* or greens when the crop is about a foot high. From the tendency of its plants to spread and from the brave show which it makes with its yellow blossoms it is apt to look a much better crop from a distance than it really is. A close inspection shows the plants to be somewhat thin and straggling. Rape is usually sown with a drill in furrows specially made for it after the field has been ploughed. The crop is harvested early. On well lands rape is seldom sown except with wheat when the two are intended to be cut together for fodder.

Til (*Sesamum orientale*.)

Til or sesamum is usually grown as an unirrigated crop on high sandy lands; its yield is very uncertain, but in a favourable year it brings in considerable profits to the cultivators. A whole field of *til* is now seldom seen; it is chiefly grown for home consumption and as a fencing for maize.

Fibres (Cotton, *Kapas, Gossypium herbaceum*).

Cotton is an easy crop, does well in years of moderate rain and has commanded remarkable prices of recent years. It is grown mostly on canal-irrigated lands. *Tillar* in the best selling variety, though the opinion is that the old-fashioned *desi* makes the best and most durable cloth; *narmán* (acclimatised black-seeded American) does not command good prices. Unirrigated cotton is very uncertain and yields indifferently. On irrigated land cotton sowings are done any time between the first of March

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Fibres (Cotton, *Kapas, Gossypium herbaceum*).

and the twenty-fifth of April, the ground being cultivated more carefully for these than for dry sowings: manure is not usually put down for this crop. About ten *sérs* of seed are required for each acre. The seed is carefully smeared with cowdung to prevent it sticking together. In place of weeding the land is worked over with a plough usually before, but often after the rains. Unless the rainfall is favourable the crop should be irrigated five or six times, on each occasion very cautiously as too much water injures it. Cotton picking begins as early as October and goes on at intervals till the middle of December, the most productive pickings being in November. The pickers are invariably women from the village, some from the cultivator's family, others of the menial class: these last get as pay a small share of the cotton they have picked each day. There are usually as many as twelve or fifteen pickings and the final picking of all is left for menials and their women. A considerable quantity of the cotton grown on well lands is retained for domestic use; only a small surplus is sold; canal-irrigated cotton is disposed of to mill-owners, or contractors who have mills. These gin and press it, and sell it to the large exporting firms. Delivery is generally made at Karachi, where the valuation is done. The cotton seed used is generally taken from the previous year's crop. Cotton sticks are used chiefly as firewood. Another enemy of cotton besides drought and over-watering is an insect known as the *tela* which attacks the leaves and causes the cotton to wither without coming to maturity. But its worst foe is the boll-worm which totally ruined the crops in several years of the past decade.

Sugarcane (*Kamád, Saccharum officinarum*).

Sugarcane is not much grown in the district; it is a crop that occupies the ground for at least a year and the labour and the cost of cultivating are immense. Cultivation, especially of *pona*, the variety eaten in the natural state, is generally restricted to localities where manure is easily procurable. Considerably the greater part of the area under sugarcane, especially in the uplands, grows the *kátha* kind, which is a thin red hardy cane used partly for the extraction of *gur* and partly as cattle fodder. *Pona* is now also pressed for *gur*, and in the Chúnián *tahsíl* it is replacing *kátha* for this purpose. A less common variety than the two previously mentioned is the *káhu* which has a very thick cane and broad leaf; it requires even more water than *pona*, but not as careful cultivation in other respects. The method of cultivation for sugarcane is as follows:— In March after repeated ploughings and heavy manuring of the land prepared for them the seed canes forming about one-twentieth part of last year's crop are unearthed from the pit in which they have lain buried for three or four months, cut into

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Sugarcane (*Kamád, Saccharum officinarum*).

lengths of about nine inches, and placed lengthways in the highly pulverised soil into which they are pressed down with the foot. From that time the crop requires constant irrigation and weeding: it is usually carefully fenced sometimes by a line of hemp planted for this purpose, sometimes by made hedges. Also the cane must be carefully watched and saved from depredations by pigs, jackals and village dogs.

Cutting is carried from 9th October till the 13th December, but the *kátha* cane which is required for fodder is left standing to be cut as it may be required. The process of extracting the *gur* is well known and need not be described here. The *pona* and *káhu* cane are usually sold to dealers, often before they are cut.

Spices and stimulants—Chillies.

Chillies or, in the vernacular *mirch*, is a crop confined principally in this district to well lands under the cultivation of Aráins, Kambohs and other equally painstaking farmers drawn from the village menial classes. It is a crop that requires immense care and trouble throughout all its stages; the young plants are grown in nursery grounds on which an immense amount of manuring and cautious irrigation is done. The plants are put out in June in land which has been ploughed six times and manured as heavily as, or more heavily than, for maize. One *kanál* of nursery should supply sufficient plants for four *ghumáons*. At first the plants are watered every third day until they become strong, when water need not be given oftener than every fifth or sixth day, and not so often if there is rain. The irrigation requires to be very cautiously done as too much water spoils the crop. The land is weeded usually four or five times at the least. The crop begins to ripen towards the end of October, and the berries are picked as they get red in the course of the next two and a half months. The pickers are usually women who receive as wages 4 *sérs* a maund of what they pick. Chillies like cotton contribute largely towards payment of the revenue.

Tobacco (*Tamáku, Nicotiana tabacum.*)

The varieties of this, as found in this district, are four: (1) *Samri*, (2) *Kanketi*, (3) *Kakkar*, (4) *Desi*. The last appears to be best liked by most classes of the people. The first three kinds are planted out in January or early in February and are ready for cutting in May. The *Desi* kind is sown a month later and is ready for cutting a month later than the other three kinds. Tobacco requires extremely careful and laborious cultivation. An immense amount of manuring is done before sowings and top-dressing after the crop has done up. Irrigation should be given every third day. Out in the villages the custom is to cut off the *Desi* tobacco level with the ground, leave it so in the sun for a day, then shove it into a hole in the ground which is closed

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Tobacco (*Tamáku, Nicotiana tabacum.*)

up with branches and leaves covered with earth so as to exclude the air. There the cultivators leave it for six or seven days after which they take the tobacco plants out, cut off the leaves from the wood and tie them up in a bundle. They keep them like this till they are sold. Some tobacco is grown on most of the wells in the district where the cultivators are Muhammadans. The Sikhs in this district do not actually grow tobacco themselves,—whether because it is contrary to their religion or because the cultivation is too laborious, is not quite clear, but they allow their tenants to grow it and take from them the full owner's share, selling it generally to the village traders when it is nearly dry.

Mendi (*Lawson Alba*).

Mendi is a shrub grown only in a very few villages of the Sutlej Hithár. It takes a long time to grow but in the course of time becomes very profitable; it flowers three times a year, and the leaves are sold well in the *bázárs* for colouring purposes. The powdered leaves are mixed with water and applied to the palms of the hand or feet which it is intended to colour and left thus to dry. It is also used to dye the hair.

Fruits and vegetables.

The commoner varieties of vegetables, such as onions, radishes, turnips and pumpkins are grown more or less on every well under cultivation by an Aráin, or indeed by the more industrious workers of other classes. The growers hawk them about in other villages where they are not grown and obtain a very fair price for them. Vegetables take a prominent place in the summer evening meal. But vegetable growing is carried to its highest pitch of excellence in the more fertile lands around Lahore where manure is easily procurable. There every acre is put under crop at least once, and in most places two to three times, a year. The mixture of crops in a single field, *e.g.*, cane, cotton, chillies, tobacco, melons and sundry vegetables all growing simultaneously is perfectly bewildering. At the recent Settlement it was ascertained that flowering shrubs, fruit trees and vegetables, all of which have increased in popularity in recent years, now occupy 23 per cent. of the total area cropped, thus:—

HARVEST.	PERCENTAGE OF TOTAL CROPPED AREA UNDER			
	Flowering shrubs.	Fruit trees.	Vegetables.	Total.
Kharíf	·1	1·9	7·2	9·2
Rabi	·2	6·0	7·5	13·7
Total ...	...	...	...	22·9

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Fruits and vegetables.

Fruit trees and flowering shrubs are still popular, but tend to give place, for utilitarian reasons, to fodder and vegetables. Fruit trees involve heavy initial expenditure, yield no return for several years and occupy the ground permanently; oranges are a safe and popular fruit; mangoes, though profitable, are precarious; pears, peaches, mulberries, loquats and plantain are all grown; but fruit of high quality from a distance is now easily procurable. Flowering shrubs (*Gulzár*) include roses of various kind, chiefly grown for *'Itr*, *Bed Mushk* (*Salix Caprea*), Jasmine and other plants grown either for decoration or for the extraction of scents and essences. Vegetables in great variety are growing in popularity from year to year; potatoes (of both the *kharíf* (Plains) and *rabi* (Hill) variety) are very paying, but are an exacting crop and particularly sensitive to winter frosts. Market-garden lands are often let on the *ijára* form of tenure. The owner cultivates the land, irrigates it and provides the necessary manure; the *ijárádár* puts down the manure, provides and plants the seed, weeds and watches, and takes over and markets the crop, paying the owner cash rates per *kanál* for periods ranging from a single crop to a year or more. The rates paid vary very considerably according to the class of the crop, the quality and position of the land and the amount of cultivation bestowed; for potatoes and the most valuable sorts of vegetables as much as Rs. 25 per *kanál* may be paid and for inferior crops as little as Rs. 10. Less commonly the *ijárádár* is a mere middleman who performs his share of the work on the land through a tenant, the tenant remaining responsible to the owner for rent.

No account of the cropping of the district would be complete without reference to the crops which are grown as fodder, for which, owing to the increase in the value of live-stock, there is an enormous demand particularly in the tract round Lahore. Fodder includes—only to mention the most important pure fodder crops—oats, *senji*, and *maina* in the *rabi*, and *chari* and *gwára* in the *kharíf*. But in Lahore and the estates of all circles which adjoin the city and to some extent in other parts of the district a very large population of the ordinary grain crops, such as wheat, barley, gram, oilseeds, maize, *kangni*, *chína* and pulses are also consumed green; the grower is spared the risks incidental to crops that are meant to mature, can raise more crops than one in the same harvest and is often able to dispose of his produce on the spot without the expense and trouble of taking it to market. Carrots and turnips are also largely used as fodder.

Crop diseases.

Some of these have already been mentioned in the accounts of the crops principally affected by them. *Tela* attacks cane,

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cotton, *jawár*, gram, barley, rape and other minor crops. It takes shape in an oily liquid exuding on to the crops affected. Good rain alone stops it. *Sundi* is a small caterpillar which attacks maize, tobacco and gram, especially the latter. There is no remedy for this. *Toka* appears to be a sort of insect which injures cotton, tobacco and fruit trees. *Kungiári* is a blackening blight which comes on wheat and barley and turns the grain black. The cause is not known, but it cannot be averted. *Kungi* is rust which injures wheat principally and is caused by cloudy weather following on a long course of rain. The leaves of the plant turn yellow and the grain either fails to form or is stunted. *Bulla* is a strong west wind which blows sometimes at the end of February or beginning of March and causes gram to dry up and the grain to shrivel in the pods, specially if the dews are heavy at night. Lightning also is said to injure gram and *masar*. White ants (*sewank*) attack most crops in dry sandy soils in case of a prolonged drought. Rats and mice also do immense mischief at times, especially in the sandier tracts of the river lands. In March and April heavy hailstorms pass across the southern part of the district in a narrow belt totally destroying all the crops they pass over. Further north such storms are rarer, but occur sometimes. Plagues of locusts afflict the district at intervals. In the spring of 1891 they came too late to injure the wheat, but destroyed all the later *rabi* crops and some of the young autumn crops.

Extension and decrease of cultivation.

(*e*) Full details of the cultivated area are supplied in statement 18 of the B Volume. In the district as a whole 69 per cent. is cultivated, the figures for the *tahsíls* being Kasúr 78, Chúnián 64 and Lahore 66. The margin of cultivation had already been reached in Kasúr and Lahore at last Settlement; in Chúnián, along with the extension of canal irrigation, there was a great development (+25 per cent.) in cultivated area, mostly accounted for by the foundation of the Chúnián Colony. Chúnián, which is to have small areas supplied by two new canals, will probably show some further expansion. *Boná fide* contraction of cultivation was due in Kasúr to a partial development of *kallar* in the Bet Bangar and Hithár circles and in the Rávi riverain (especially the Lahore Khádir) to the abandonment of unprofitable home land in favour of good virgin soil in the canal colonies.

Changes in agricultural system.

Speaking generally, the district has not yet reached the acute stage in which the farmer is forced by shortage of land and insufficient profits to have recourse to serious expenditure of capital on labour-saving machinery or to the introduction of a revolutionised technique such as modern dry-farming. Old-

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Changes in agricultural system.

established methods of cultivation have not resulted in any continuous decline in productivity. Increased canal-irrigation and the presence of new land for cultivation in the uplands and the restraint imposed by plague on over-growth of population have still left the farmer land enough and sufficiently productive for his needs. The complaint is often heard that the virtue has gone out of the land, but the fallacy is almost self-evident; for, were depreciation to be actually in operation, fields that have been under tillage for thousands of years should now be yielding nothing at all instead of an outturn which, in response to time-honoured agricultural methods varies only with seasonal conditions. After a few years of cultivation new land, according to modern professional opinion, does begin to deteriorate, but the minimum is reached before long, say in a couple of decades, and the fertility point then remains stationary. If the short period of virgin productivity be excluded, the present does not suffer by comparison with the past. So far as the stimulus towards the adoption of improved methods and appliances has been at all directly felt, whether in the form of the pinch of small holdings or, *per contra* of the possession of land and capital enough to support enterprise, a response has been by no means wanting, and there seems reason to think that, as the suggestion becomes more and more lively, the old dead level of productivity with which the cultivator has been so long content will disappear. The labours of the Agricultural Department in the direction of organised demonstration are already bearing fruit. The Rájah and other improved ploughs for deep ploughing, chaff-cutters, iron-feeding troughs, and tubes for wells which suffer from a treacherous supply are all making their way. The *zamíndár* has a very shrewd appreciation of the crops that pay him best and is never so wedded to any of them as not to be ready to abandon it in favour of any kind that is from time to time more profitable. The valuable *rabi* crop is now got in more rapidly than heretofore, threshing being started before the whole area is reaped and the harvest being garnered without the old leisurely intervals for attention to cane and cotton. Much has been done in the direction of the introduction of improved varieties of seed, especially maize, cotton and wheat, the people in the latter case being no longer so easily content with the thoroughly impure mixture returned by the ginning factories.

The Government Agri-Horticultural Gardens, Lahore.

In dealing with extension of modern ideas mention must be made of the Agri-Horticultural Gardens of Lahore, the objects of which are to improve the agriculture and horticulture of the province by judicious experimentation and distribution of seeds.

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The Government Agri-Horticultural Gardens, Lahore.

They date from 1862, since when however their area (now 157 acres) has been greatly increased. Until 1883-84 the arrangement was in the hands of a semi-private association, the Agri-Horticultural Society of Lahore, whose foundations were laid in the days of the occupation. The gardens have always combined the functions of a Government institution having a business character with those of a public park and recreation ground. Until 1905 the greater portion of the Gardens was under agricultural and horticultural crops mostly experimental, but in that year the new Agricultural College at Lyallpur took over all the agricultural experiments, liberating a considerable portion of the gardens for ornamental treatment. In 1912-13 a working plan covering five years was drawn up for the improvement of the gardens. the completion of which will clear the gardens of the many old and unsightly *farásh* trees which are now an anachronism in Lahore and will reduce the present excess of *shíshams* in favour of brighter varieties, including flowering shrubs. In 1912 an examination of the non-herbaceous plants of the gardens was started and a list of the trees grown was published. This was followed by an examination of the shrubs, climbers, palms, bamboos and succulents, not included in one of the other classes of plants. The classification is not satisfactory, as many plants which are thus under favourable conditions are only shrubs in Lahore and apart from this the distinction between trees and shrubs, shrubs and climbers, etc., is by no means sharp. The enumeration showed that 240 trees, 162 shrubs, 78 climbers, 15 palms and about 43 kinds of succulents as well as 12 bamboos are grown. The enumeration showed further that the number of kinds of trees, shrubs, etc., grown is by no means large even when all allowance is made for the extremes of climate which plants in Lahore have to endure. It also showed that a large proportion of the plants were represented by a single specimen. Efforts were at once made to improve matters and in the last 3 or 4 years 41 new trees and 20 new shrubs have been introduced and have probably been established; also 36 trees and 9 shrubs represented by single specimens have been duplicated or in some instances are now represented by several specimens. Expensive experiments have been made with the genus Eucalyptus, the object of which is to discover what varieties of this valuable and rapidly growing tree are best suited to the Punjab. Specimens have been obtained of 7 species which had certainly been tried before, as they are found in various places in the Province and in most cases probably came from the gardens; 5 species have also been brought to notice which are probably suitable for the Punjab and which apparently have not

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The Government Agri-Horticultural Gardens, Lahore.

previously been tried. The species known to do well in the Punjab Plains are E. *citriodora*, E. *crebra*, *E. kirtoniana*, E. *rudis*, E. *saligna*, E. *paniculata*, E. *rostrata*, E. *robusta*, E. *melanophloia*, E. *siderophloia* and E. *tereticornis*. The following will probably be found on further trial also to be suitable :—*E. gomphocephala*, E. *hemiphloia*, E. *melliodora*, E. *microtheca* and E. *redunca*.

The income from the gardens, which is derived from the sale of seeds of all kinds and of young trees and shrubs, fruit-bearing, and other in North-West Frontier, Punjab and Delhi Provinces (see margin), amounted in 1915 to about four-fifths of the total expenditure.

Flower and vegetable seeds.	Tree-seeds		Young trees and shrubs.	Fruit trees.
	Lbs.	Packets.		
13,522	519	2,271	53,000	16,000

The following figures exhibit the development shown since 1892 :—

Year				Rs.
1892 ...	Income ...	(a) Garden sales	... ...	13,973
		(b) Government grant	... ...	8,629
			Total ...	22,602
	Expenditure ...	... ...	... ...	22,603
1915 ...	Income ...	(a) Garden sales	... ...	31,792
		(b) Government grant	... ...	11,140
			Total ...	42,932
	Expenditure ...	... ...	... ...	41,804

Land Improvement and Agriculturists' Loans Acts

(*f*) Advances under the Land Improvement Loans Act are generally properly applied for the improvements for which they were made. Principal and interest are recovered without diffi-

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Land Improvement and Agriculturists' Loans Acts.

culty when due and there are few arrears. The table below shows the advances given and the recoveries under principal and interest made in the past six years :—

Year.	Balance outstanding at commencement of year.	Amount advanced during the year.	Recoveries.		Balance at close of year.
			Principal.	Interest.	
	Rs.	Rs.	Rs.	Rs.	Rs.
1909-10 ...	26,507	1,050	13,532	3,333	14,025
1910-11 ...	14,025	975	4,295	1,153	10,705
1911-12 ...	10,705	3,605	2,537	803	12,005
1912-13 ...	12,005	2,250	2,366	542	11,889
1913-14 ...	11,889	850	2,398	433	10,341

Loans under this Act and also under the Agriculturists' Loans Act are more required in the Lahore and Chúnián *tahsíls* than in Kasúr. Below are given figures for advances and recoveries made under the latter Act :—

Year.	Balance outstanding at commencement of year.	Amount advanced during the year.	Recoveries.		Balance at close of year.
			Principal.	Interest.	
	Rs.	Rs.	Rs.	Rs.	Rs.
1909-10 ...	79,657	80	60,700	4,879	19,038
1910-11 ...	19,038	416	17,909	1,285	1,472
1911-12 ...	1,472	532	1,139	50	865
1912-13 ...	865	2,070	770	40	2,165
1913-14 ...	2,165	660	1,404	180	1,421

Within recent years the largest advances were made in 1902-03, 1904-05, 1905-06, 1907-08 and 1908-09. 1902-03, 1904-05 and 1907-08 were years of short rainfall and short fodder supplies and in 1907-08 the percentage of crop failure was very

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Land Improvement and Agriculturists' Loans Acts.

high. Hailstorms in 1902-03, 1904-05 and 1907-08, frost and cattle disease in 1904-05, and damage to cotton and rice by rats in 1907-08 were the chief agricultural calamities. In 1905-06 and 1908-09 the monsoon rains were in excess, causing floods in the latter year; 1905-06 was otherwise unfavourable also, the crops suffering from frost and insect pests and cattle from disease: large areas failed in both years and advances were required for the purchase of seed and fodder.

Co-operative Credit Societies.

The co-operative credit movement did not, for want of staff, make a start in the Lahore District till 1911. There is plenty of money in the district and the *zamíndár* population is highly intelligent. By 1912 the principle had thoroughly taken root. The following figures will illustrate the rate of development:—

Year.	Number of Societies.	Membership.	Capital.
			Rs
1912	55	3,181	1,34,126
1915	121	6,635	10,79,789

There was at first no Central Bank at Lahore and the societies were financed from the Jullundur District, but the need of a financing agency was felt all along. In the year 1912 a Government servants' bank was started at the Civil Secretariat which lent out Rs. 5,600 to the societies of the district. In the year 1913 its capital amounted to a *lakh*; now it is 6 *lakhs*, all of which is lent out to societies except Rs. 18,000 lent to members. It has taken over almost all the loans of Jullundur District, does all the work of a central bank and enjoys general confidence. An interesting feature of the co-operative scheme in Lahore is that an *arat* shop was started at Pattoki in the Chúnián Colony in 1914, the shareholders of which with few exceptions are the societies and their members. Its working capital amounts to Rs. 1,20,000. It charges rather less commission from *zamíndárs* than from shopkeepers and is very popular. In *rabi* 1914 it did about one-third of the total business in the *mandi*, dealing directly with the big firms. It is also working now as an agency for the supply of seeds to *zamíndárs*. The present staff consists of an Inspector with three Sub-Inspectors, all paid by the Society.

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Sales and mortgages of land.

From the figures compiled at the recent Settlement it was established that 7·3 per cent. of the total cultivated area had been sold since 1893, 5·14 per cent. to agriculturists and 2·2 per cent to others. 12·9 per cent. of the cultivation is at present under mortgages with possession, 9·4 per cent. of which are with agriculturists and 3·5 with others. The following is an extract from the Final Settlement Report of 1916 :—

Detail.	To *Zamíndárs.*		To OTHERS.		TOTAL.	
	Percentage of cultivated area.	Price per acre.	Percentage of cultivated area.	Price per acre.	Percentage of cultivated area.	Price per acre.
		Rs.		Rs.		Rs.
Sales since 1893 Settlement.	5·14	114	2·2	93	7·3	108
Mortgages with possession existing now.	9·4	89	3·5	65	12·9	83

The proportion of cultivated area transferred by sale is trifling. These prices do not include figures for the special Lahore Circle, which are quite abnormal, or for the Chúnián Colony, where very little land has yet changed hands in private transactions. In Lahore *tahsíl* since last Settlement the price of ordinary agricultural land has nearly doubled, in Chúnián *tahsíl* it has trebled and in Kasúr *tahsíl* more than trebled. The area of land mortgaged is slightly greater than at last Settlement in every *tahsíl*, but everywhere the area mortgaged has fallen considerably from what it was before the Land Alienation Act came into force in 1901. The area under mortgage is highest in the Lahore *tahsíl*, but even there it is lower than in any *tahsíl* of the adjoining district of Amritsar. In Chúnián about one-third of the mortgages are held by non-agriculturists ; in Kasúr and Lahore the fraction is as low as one-fourth. Except in the Rávi Riverain there is no serious indebtedness ; everywhere the area redeemed in recent years exceeds the area mortgaged.

Professional money-lenders.

The passing of the Land Alienation Act and the development of the co-operative credit system have made the landowner much less dependent on the village *sáhúkár* than he used to be. The rate of interest charged by these professional money-lenders now varies according to the security that the debtor has to offer, though 2 per cent. per month is about the average. *Khojas,* or

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Professional money-lenders.

Muhammadan usurers, fix their interest in grain or kind. *Khatrís* usually allow *chhot* or a deduction of one anna in the rupee on interest charged when accounts are made up. The big *sáhúkárs* have four sets of books, the *súr* or detail of daily income or expenditure in connection with loans, the *kháta* or daily balance book, the *lekha bahi* or ledger showing each debtor's separate account, the *roznamcha* or general account book for all income and outgoings of the day. The money-lenders never bank their money. They keep it circulating in loans as much as possible ; otherwise they bury it in the ground. Arbitration for the settlement of disputes between the money-lender and his debtors is not now common. The richer Jat landed proprietors of the Mánjha who have accumulated wealth from their canal-irrigated lands have captured a large portion of the trade of the ordinary money-lending classes, and are little, if at all, easier in the terms on which they loan money.

Pasture grounds and feeding of cattle.

(*g*) Statistics of agricultural stock and horse and mule-breeding are given in Tables 22 and 23 of the statistical volume. The profits from agriculture at present greatly exceed those to be made from the raising or keeping of stock. Also the cultivated area of the district has, under extended canal irrigation, enormously developed. Grazing grounds have contracted *pari passu*, till the only land practically which is left for pasture is either upland which is not fit for cultivation or low-lying riverain which is subject to heavy flooding. On the former very little grass grows, since no attention is ever paid to its development by ploughing or sowing of grass-seed, though effort of this kind on a large scale would probably pay. In the lowlands too much water collects and only coarse rank grass grows, which often produces digestive troubles and debilitates the system. The best grasses are *Dúb* (Cynodon Dactylon) and *Dháman* (Pennisetum Cenchroides). The latter is a particularly good feeding grass. Lectures on these grasses have been given by the Chief Superintendent, Civil Veterinary Department, who has shown the people how to sow them. *Bhúsa* (wheat or oat) is stored for cattle, but the wastage in *kasíl* (green wheat and oats) is very great. Green *jawár* and maize is also used, but there is no attempt at siloing. *Jawár* and maize is stacked but until the *zamíndárs* recognise that this should be chopped fine before use a great deal is wasted.

Wealth of the district in live-stock; its importance as a breeding area.

The district as a whole is well-off for live-stock, there being 7 horned cattle per plough and the interest under all heads since 1868-69 has been remarkable. The proportion of browsers per plough is 3, but sheep and goats are not kept

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Wealth of the district in live-stock; its importance as a breeding area.

by the ordinary *zamíndár*. There is a marked difference between the classes of well and plough cattle required in the uplands and lowlands respectively. In the lowlands the soil is light and the water is near the surface; light cattle accordingly suffice. In the uplands wells are deep and the soil stiff, and none but large heavy animals are fit for the work. Broadly speaking, the only surviving indigenous cattle are the light class, a considerable number of whom are bred by the small holders of the Rávi valley. But the district as a whole is not a cattle-breeding area; the old local Mánjha breed of heavy cattle has practically died out and superior stock is purchased from dealers, mostly Aroras, who import animals from Hissar, Jhang, Gujránwála, Ferozepore, Jhelum, Ráwalpindi, the Málwa and Sindh. These dealers give credit, pitch their prices high and recover in instalments. People who can afford to pay cash do better to buy at big fairs such as those at Amritsar and Jaitu in the Nábha State. In both riverains there is a large influx of cattle for grazing both from the uplands of the Lahore District and from other parts of the Province. Stock-raising and keeping is more popular in the Lahore *tahsíl* than in the other parts of the district on account of the handsome profits that can be made from both live and dead animals in Lahore city. The most marked tendency of recent years has been the substitution of buffaloes of both sexes for bulls and bullocks. The she-buffalo is a good milker; milk and *ghi* have a fine market and the price of both have appreciated; the she-buffalo does particularly well on stall-breeding and the buffalo-calf does not share the milk because, being of little value for draught purposes, he can be slaughtered and sold. Well-to-do *zamíndárs* take a pride in their she-buffaloes and keep as many as they can afford. The inefficiency of the male-buffalo for plough and well purposes, owing to his slowness and inability to endure great heat, is the weak point in this modern development. The increasing devotion to the buffalo is however a feature practically confined to the canal-irrigated tracts; in tracts like the Rávi riverain the farmer still recognises that it is more economical to keep a cow and breed bullocks than to put up with buffaloes and buy from dealers.

The decrease in the number of ploughs in the district is not so difficult to reconcile with the increase in cultivated area as would at first appear. The fact is that not only has canal-irrigation lightened the ploughman's labour but a better class of animal is generally used.

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Wealth of the district in live-stock; its importance as a breeding area.

The number of carts has nearly quadrupled since 1868-69: plying carts for hire is the first resource of the *zamíndár* who finds his holding no longer large enough to support him: on all the metalled roads there is an increased demand for the carriage of agricultural produce, bricks, *kankar*, &c., and the construction of railways and canals has been the cart-owner's opportunity.

Horse, pony and mule breeding.

The Lahore District is one of the five districts which comprise the Lahore Circle of the Army Remount Department, and is under a Superintendent, assisted by a trained staff of Indian officers. There are now standing in the Lahore District 19 Imperial horse stallions, 15 District Board pony stallions and 14 donkey stallions for mule-breeding. The horse stallions consist of thoroughbred English and Australian, Arab, Ahmednagar stud bred Arabs, Indian stud bred, Kathiáwár and Márwári horses. The pony stallions are all Arabs. The donkeys are Italian, Cyprian, North American and Punjabi bred. They are distributed throughout the district at the following places:—Shalamár, Ráiwind, Kasúr, Chúnián, Kana Kacha, Hudiára, Manak, Luliáni, Pattoke, Patti and Naulakha. At the last seven places stables have been built at the expense and by the generosity of local gentlemen.

Horse breeding.

Those mares which the Superintendent considers suitable to breed remounts from for the Army are branded G. I. Mares so branded are entitled to service by Imperial horse stallions free of charge. In the last twenty years the number of branded mares in the district has increased from 968 in 1895 to 1920 in 1914-15. In the same period the number of mares served annually has increased from 622 to 1,308. The annual number of foals from branded mares has increased from 159 in 1895-96 to 433 in 1912-13. In spite of great drainage of branded mares from the district the type has been steadily improving. This is due to the fact that the people of the district are prosperous, and can afford to feed and nourish their young stock well. The improvement in the quality of the produce is discernible from the increase in the number of young stock purchased by the Superintendent for British Cavalry—

Year.	Number of stock purchased for British Cavalry.
1910-11	3
1911-12	10
1912-13	17
1913-14	29
1914-15	70

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Horse-breeding.

In 1914-15 the Lahore district was the second most successful horse-breeding district in India. In addition to the above numbers purchased for British Cavalry, large numbers of young stock and horses have been purchased by Indian Cavalry. The majority of horses and young stock purchased by Indian Cavalry Officers at the Amritsar Fair in recent years have been bred in the Lahore district. The improvement in quality would have been more rapid still, had it not been for the great drainage of mares and fillies from the district. Large number of fillies are each year bought up by "*Bojpuris*" from Bengal, and by the Agents of Native States. The local horse-dealers of Lahore and Amritsar, of which there is a large number, also help to drain the district of many of its best mares.

Pony-breeding.

If the progress made in the matter of horse-breeding from Imperial stallions has been good and steady, the progress made in pony-breeding has been truly remarkable. The number of mares served by District Board pony stallions in 1914-15 was 1,684 by 14 stallions or 120 mares per stallion, as compared with 153 by 5 stallions or 30 per stallion in 1895. The most rapid progress took place during the period 1908—11, when the number of mares served increased from 390 to 1,755. Since 1911 there has been a slight decrease due to a less number of stallions being available. The number of pony stallions in the district is not nearly sufficient for the number of mares to be served. The stallions are being over-worked, and further progress is therefore at a standstill. This is deplorable, as the pony-breeding industry is an important one, and every day grows in importance. The conditions for breeding in the district are exceptionally favourable for India; also the large and central markets of Lahore and Amritsar, which supply the whole of India with horses and ponies, are close at hand, and the demand is always keen and likely to become keener after the present war, owing to the probable curtailment of supplies of ponies from Australia and Arabia.

Mule-breeding.

In the Lahore District 14 donkey stallions are maintained out of Imperial funds for mule-breeding. The donkeys each serve some 90 mares per year. The industry to which at one time there was a certain amount of religious prejudice has of recent years grown immensely in popularity. From even the most degenerate type of pony mare it is possible to breed good mules, provided the donkey stallion is a good one. Therefore to people who cannot afford to purchase

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Mule-breeding.

or to maintain sufficiently good mares for horse or pony breeding mule breeding is a source of considerable profit. A good 12 months old mule, the market price of which is Rs. 150, often brings in to the lucky breeder double and even treble the value of the mare from which it is bred. There is great competition to purchase the young mules which are bred and they are mostly bought up by *kumhárs*, etc., who outbid the prices allowed by Government. They set the mules to carry heavy loads at an extremely tender age, get as much value for their money as possible out of the mules for three or four years and then sell them again. But in consequence of the severe treatment the mules suffer when still almost in foal stage; they get broken down, and only a very small proportion of those bred are found at five or six years' age fit to purchase for Army purposes. It is for this reason that Government of recent years has adopted the measure of purchasing mules at the very young age of eight or nine months, but even still the *kumhárs* manage to step in before Government to purchase and outbid Government prices.

Horse fairs.

Until 1916 there was no Imperial Horse Fair held in the district, as it appears to have been considered that the big fairs biennially held at Amritsar were sufficiently close at hand for the people of the district to buy and sell horses. In October 1913 a small horse fair was instituted as an experiment at Kana Kacha which proved so successful that in 1914 the experiment was extended to Kasúr and Pattoke. In this year the Kana Kacha fair was again a complete success, as also were the two new fairs at Pattoke and Kasúr. The number of horses and mares which attended and the number of transactions which took place at the Kasúr fair were so large that it was decided that this was worthy of becoming an Imperial fair. For this fair in future the Imperial Government has consented to award Rs. 1,000 in prizes for horse-breeding stock.

In 1914-15 the amount awarded for prizes for horses by the District Board at the three district fairs were as follows:—

Kana Kacha	...	...	115
Kasúr	...	...	177
Pattoke	...	...	170

Full statistics for horse, pony and mule breeding will be found in Table No. 23.

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Cattle.

The breeds of cattle met with in the Lahore District are the Hissári, Montgomery, Dájal and mixed breeds. These are purchased from dealers. The average price (which at a rough estimate stands per head for good cattle as follows, *viz.*, bullocks fit for heavy draught work Rs. 150, cows Rs. 80, male buffaloes Rs. 60, female buffaloes Rs. 150) has about doubled in the last 20 years.

Cattle-breeding.

There are at present 69 District Board bulls in the district, 15 of which have been sold to *zamíndárs* at half price. These bulls are purchased from the Hissár Farm after careful selection by the Chief Superintendent, Civil Veterinary Department, in consultation with the representative of the District Board. The *Zaildárs* and *Lambardárs* of the villages are responsible for their maintenance. The bulls roam about the fields and feed on the crops, so that beyond the purchase price they cost the District Board nothing. The stock got by these bulls is a great improvement on the local breed. The bulls in consequence have been very popular. The Civil Veterinary Department gives lectures to villagers on breeding and the care of young stock.

Fairs.

Horse and cattle fairs are held annually at Kahna Nau, Kasúr and Pattoke and prizes awarded. In the last year over Rs. 3,000 were collected in fees, and the following sums distributed in prizes, *viz.,* horses Rs. 600, cattle Rs. 600 (round figures), sheep Rs. 30.

Cattle diseases

These are very prevalent in the district. *Patwáris* report outbreaks of contagious diseases such as Rinderpest (*Máta, Pir, Wuddi, Zahmat*), Hæmorrhagic Septicæmia (*Galghotu* or *Ghotu*), Foot and Mouth disease (*Munh Khur*), &c., and the outbreaks are attended by the Veterinary Assistant. The mortality from Rinderpest and Hæmorrhagic Septicæmia has considerably decreased since inoculations have been performed by the Civil Veterinary Department. Foot and Mouth disease occurs every year, but the mortality is very small. Although the disease does not cause any deaths, it causes pedal deformities and in consequence it depreciates the value of the animal. The people do nothing to prevent the spread of contagious diseases, but it is to be hoped that, as the Civil Veterinary Department is lecturing on hygiene in villages, matters will improve.

Civil Veterinary Department work in the district.

Within recent years considerable progress has been made in the treatment of all diseases on modern scientific lines. In 1902 there were only two qualified Veterinary Assistants in the district, but now there are four. Three of these are in charge of

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Civil Veterinary Department work in the district.

Kasúr, Chúnián and Kahna Nau Veterinary Hospitals and one is doing itinerating work. The work of the Civil Veterinary Department is now becoming well known and the *zamíndárs* are beginning to realise the advantage of scientific treatment. The Department does not only deal with contagious and non-contagious diseases but is doing a great deal in preventing cruelty. The cruel indigenous method of castration (*malna*) is being stopped as the Department is doing this work now on scientific lines.

Sheep.

Sheep are not kept by *zamíndárs* but by *telis* and *julahás*. The different breeds met with are *Bíkáníris, Bágri, Lohi, Boti, Káli* and *Dumbás*. The *Bíkáníris* are coarse-wooled with fairly long ears and medium-sized tail. The *Bágris* are somewhat similar to the *Bíkáníris* but have small curled and twisted ears. *Lohi* is a large sheep with brown or black face, very long ears and coarse wool. *Boti*, somewhat similar to *Lohi* but coarser wooled. *Káli* are large leggy black sheep with very long tails touching the ground : very often at the end there is a white tip. *Dumbás* are of three classes, *viz.*, (*a*) large sheep with very thick tails which are level with the rump, (*b*) large sheep with thick pendulous tails, (*c*) small sheep with pendulous tails ; the wool of these classes is coarse. The value of all classes of sheep varies from Rs. 5 to 10.

Sheep diseases.

Gillar generally occurs in marshy pastures and causes a very heavy mortality. The Civil Veterinary Department warns sheep owners not to graze sheep in these infected localities. Variola Ovina (*chíchak*) does not generally cause a very heavy mortality.

Goats.

The following breeds are met with, *viz.*, *Jámnagari*, long-eared goats, *Kágháni*, *Kashmíri*, *Bíkáníri* and *Sirmori*. The long-eared variety is reputed a heavy milker and sells for Rs. 15 to Rs. 20. The other varieties are imported solely for slaughter at Amritsar and Lahore.

Punjab Veterinary College.

This institution was established in a small way in 1882 for the elementary training of Indians in Veterinary Science. The demand for the services of graduates was immediate and considerable. It has from time to time been found necessary to enlarge the classes and improve the standard of teaching, and additions to the teaching staff have been made and the college has gradually increased in size. In 1913 advantage was taken of the King Edward Memorial Scheme to build a new college on the most modern lines on a spacious site on the Tapp Road near the District Courts and to appoint a larger staff of teachers so as to

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Punjab Veterinary College.

place the institution in a position to give the best possible training to be obtained in India. There are now five European and three Indian Professors and eleven Assistant Professors. There are separate courses of four and three years in Urdu as well as a Post-Graduate Course of one year in English. Veterinary Graduates are trained for the Indian Cavalry, Remount Department, Imperial Service Troops, &c., and Civilian students from the Punjab, United Provinces, Central Provinces and Rájpútána are admitted. Accommodation is provided for 220 students in the ordinary course and 20 in the Post-Graduate course.

System of irrigation.

(*h*) The following table shows the proportion of land in each of the principal classes :—

Tahsíl.	*Cháhi.*	*Nahri.*	*Cháhi-nahri.*	*Sailáb.*	*Báráni.*
Lahore	15·9	55·5	0·8	5·5	22·3
Kasúr	15·8	54·3	1·7	4·6	24·5
Chúnián	25·2	49·2	8·2	3·9	14·4

(*i*) *Chahi*—Construction of wells.

The form of well always used in this district is that known as the Persian wheel, but near the river the *dhínkli*, consisting of a long pole swinging on a fulcrum and with a bucket attached at the end, is sometimes found : these, however, only irrigate an acre or so of land. Usually wells are lined with brickwork in which case they are called *pakka :* without brickwork they are called *kachcha*, being lined with nothing more than grass. *Kachcha* wells seldom last more than two or three years and then fall in : and while standing they cannot irrigate as much as a masonry well. On the other hand a *kachcha* well costs from Rs. 30 to 40 to build, while a masonry well costs from Rs. 500 to Rs. 900. At present there are in this district 9,404 masonry wells of which 969 are double wheeled and 365 unlined wells. The area a well can irrigate depends so much on the nature of the soil, the character of the season, the state of repair in which the well is, the quality of the cattle employed, and the industry of the cultivators, that it is not possible to say the area irrigated is so much and no more.

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Construction of wells.

The following table shows the average depth and recorded area of the wells in the different tracts of the district :—

NAME OF TRACT.	AVERAGE DEPTH OF WELLS IN FEET.		Average recorded area of each well.
	Total well.	Water.	
Mánjha ...	26	14	26
Hithár	24	7	34
Trans-Rávi	22	7	15
Cis-Rávi	32	8	21

The construction of a well is a great event in the lives of the brotherhood: and operations are inaugurated with various formal ceremonies. The expenditure incurred is somewhat as follows :—

—	Lowlands.	Mánjha.
	Rs.	Rs.
For digging the hole (*pár putna*) (Rs. per *háth*) ...	21	45
Wooden frame on which the brickwork is constructed (*chakk*).	30	35
Distribution of *gur* when putting in the *chakk* ...	210	10
Bricks for lining the well	52	420
Carriage of bricks to well	25	42
Two bricklayers at Rs. 2 a *háth* of work done ...	48	80
Food for bricklayers (at Re. 1 per diem)	24	40
Mortar for laying bricks	20	60
Other labourers' wages (5 men at Re. 0-6-0 per diem each).	45	75
Pay of three divers at Rs. 2 a *háth*	27	34
Food for divers (Rs. 18 per diem)	15	20
Miscellaneous alms	12	25
Total ...	529	886

The calculation does not pretend to be exact, or quite exhaustive: on the other hand considerable economy can be effected if the brotherhood choose to dig the ground and do other common labourer's work themselves. The alms are distributed at different stages of the operations. The divers have terribly hard work

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Construction of wells.

going down below the water and fixing the excavating shovel called the *jhamb* into the ground before it is pulled up by a rope from above. They are fed very sumptuously on bread, *ghi*, *gur* and tobacco. Four divers is the usual allowance for excavating at an ordinary well. In case of difficulty they get more assistance. When the proper water-bearing stratum is reached, they say *tung á gaya*. If they cannot reach this stratum, they say there is no *tung*. Sometimes they come on a hard sticky clay which the divers cannot get through: in this case they must either give up the site, or sometimes they evade the difficulty by sinking a smaller cylinder inside the original one. These smaller cylinders are known by the name of *bachcha*. Similarly when the water level in an old well has sunk below the brickwork or when sand comes into the well along with the spring water (*khúh pun gaya*) a *bachcha* is sunk. When the well is once built, assuming that it remains in good order the only expenditure required on the well itself is for cleaning, which must be done every three or four years. The wood-work, however, by means of which the well is worked costs a considerable amount and requires to be constantly repaired or placed as it wears out under continual use. Its first cost ranges from Rs. 40 to Rs. 60 and the annual cost of repairs varies from Rs. 12 to Rs. 20. The cost of the wood-work falls on the owner of the well and not on the tenant. The *chakkal jora*, or two main cog-wheels, are usually bought from the village carpenter and cost from Rs. 26 to Rs. 34 according to their make. If, however, the owner has the *kíkar* wood available, he makes it over to the carpenter who would charge Rs. 14 or so for the job of making up the wheels. Most of the other pieces of wood-work can be made up by the owners themselves if they have the wood which need not necessarily be of *kíkar*. Generally for such purposes the trees growing round the village wells supply material. Wells are for the most part owned and also cultivated in shares; the shareholders have their turns, usually lasting three hours each, fixed by lot, but the shareholder who takes the trouble to put on the rope ladder and water pots is allowed to take first turn. When once the order is fixed it is strictly adhered to. It is very seldom that any dispute arises among the shareholders on this account.

Cropping on wells.

The course of cropping on wells varies in different parts of the district. In the sweet water wells of the Mánjha out of a total well area of 24 acres, 4 would be sown for the *kharíf* and 20 for the *rabi* harvest. Less land is sown in the former than the latter, because there is much less time for preparing the land

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Cropping on wells

in the summer than there is in the winter months. The *kharíf* area would be distributed roughly as follows: ½ acre maize, 1 acre cotton, ½ acre sugarcane, ¼ acre rice, and the rest fodder and other miscellaneous crops. In the *rabi* 15 acres would be wheat, ½ acre barley, 1 acre oilseeds, and the rest mainly fodder. In the western Mánjha where the wells are bitter the autumn cropping is very limited, and the spring cropping is almost all wheat with a little barley. In the Hithár tract an ordinary well commands from 26 to 39 acres, but of the commanded area not more than 27 acres would probably be sown. The autumn cropping comes about 5½ acres, 1 being maize, 1½ cotton, and 2 fodder, while in the spring 21½ acres would be sown as follows: wheat 16, barley 1, fodder and miscellaneous crops 4½. In the Rávi estates where well areas are only about 15 or 16 acres and land is not plentiful, more proportionately is kept for the valuable autumn crops which ripen quicker and occupy the land a shorter time than the spring crops. This involves heavy expenditure on manure, otherwise the land lying fallow so seldom as it does would decrease in fertility On the whole well cultivation in this district is carried on with sufficient care and economy. The landowners in well-irrigated tracts are for the most part very industrious both by inclination and habit. They understand the requirements of their land and carry these out as far as circumstances permit. The difficulties they have to contend with are never-ending. Cattle disease, short fodder supplies, constantly recurring defects in their wells are calamities which the cultivator of well lands is always having to face. It often happens that owing to hurry and scamping of their duties on the part of the divers or of the bricklayers, the well settles immediately after it has been completed and the brickwork cracks from the very foundations, in which case the well must take in a quantity of sand with the water and soon gets choked up. Many wells are now working notwithstanding defects which interfere sadly with their working and diminish greatly the water-supply. There has been a net increase of 6 per cent. since the Settlement of 1892-3 in the number of wells.

Jhallárs.

The *jhallár* or waterlift is merely the Persian wheel of a well transferred to the bank of a canal or a pond or river stream. As long as there is sufficient water their irrigating power is as good as or better than that of a well of the same depth.

The following statement illustrates the immense development that has occurred in canal irrigation and in realisations of

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(ii) *Nahri*—Development of Canal irrigation.

water rate:—

Year.	Total canal-irrigated area, in acres.	Total realisations from water-rate, in rupees.
1892-93 ...	326,693	10,89,028
1914-15 ...	865,448	20,51,268

Canal systems.

The Lahore District is at present supplied by no less than four different canal systems, *viz.*, the Upper Bari Doab, the Lower Bari Doab, and the Upper Chenab, all perennial canals, and the Upper Sutlej Series composed of Inundation Canals. All four canals are Major irrigation works and none of them is navigable. The total area irrigated according to the measurements of the recent Settlement is 686,498 acres. In practically all tracts supplied by the perennial canals except the small area commanded by the Upper Chenab Canal irrigation is provided throughout the year. The main canal-irrigated crops are wheat, gram, cotton, oilseeds, maize, rice and fodder. The Upper Chenab Canal area, comprising a narrow belt on the right bank of the Rávi, lies almost wholly within what is technically known as Zone C—an area in which, owing to the proximity of the spring level to the natural surface, irrigation is only required for the *kharíf* (autumn) harvest. The Upper Sutlej Series of inundation canals flow, as their name implies, only during the hot weather months when the Sutlej is in flood.

Canals and main channels—The Upper Bári Doáb Canal.

A full account of the Upper Bári *Doáb Canal* will be found at pages 207 and 208 of the Provincial Volume of the 1908 Gazetteer, which should be referred to for detailed historical information. The canal, which has its head-works at Mádhopur in the Gurdáspur District, takes off from the left bank of the Rávi and supplies the districts of Gurdáspur and Amritsar, which lie at the head of the system, before it reaches Lahore, which lies at the tail. The main line terminates at its 31st mile, near the Civil Station of Gurdáspur, there separating into the Kasúr and main branches; the Kasúr branch, 7 miles lower down, gives off the Sobráon branch, and the main branch, after 25 miles, gives off the Lahore branch; all four branches supply

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The Upper Bári Doáb Canal.

the Lahore District. The main channels, with a total length of 82 miles, follow the crests of the ridges into which the tract is divided by its natural drainage and there are 706 miles of distributaries from which water is brought upon the fields by means of water-courses constructed and maintained by the cultivators.

The *Lahore Branch* enters the district at Wágah at its 40th mile; it then trends south-west for 17 miles, passing between Lahore and the Cantonments. Thence it continues close to the Rávi *Dhaia* beyond Niázbeg as the new Niázbeg extension started in 1912, which penetrates as far as 15 miles into the Chúnián *tahsíl*. The branch has at present 11 distributaries working and the total length of the branch with its distributaries is 165 miles.

The *Main Branch Lower* enters the district in its 41st mile near the village of China and takes a course practically identical with the boundary of the Lahore and Kasúr *tahsíls* to opposite the Railway Station of Ráiwind; thence it runs parallel with the Railway, separating at its 93rd mile into the important Rakh and Wán Distributaries, opened in 1902 and 1880 respectively, within the Chánga Mánga Reserve. This branch, which now penetrates to the extreme west, is the most important in the district; it traverses the richest parts of the Mánjha, including the Chúnián Colony, and is served by no less than 17 distributaries, the total mileage being 504 miles.

The *Kasúr Branch* enters the district in its 59th mile in the village of Mughal and divides itself some 8 or 9 miles lower down into the Khem Karan branch and the important Khem Karan Distributary, the latter of which runs nearly as far as the boundary of the Kasúr estate. The Rasúlpur *Rajbáha*, another large distributary of the Kasúr branch entering the district in the boundaries of the estate of Patti, also does some irrigation in this *tahsíl*. The total mileage of the branch including distributaries is 107 miles.

The *Sobráon Branch* enters the district about 8 miles east of the Kasúr branch, debouching into a natural drainage channel at the town of Patti. The Khara, Patti and Jaman Distributaries of this branch run the last portion of their courses in the Kasúr *tahsíl*. The total mileage computed as before is 11 miles.

The Lower Bári Doáb Canal.

This canal, together with the Upper Jhelum and Upper Chenab system, forms what is generally known as the "Triple Project," the object of which is to irrigate the extensive arid wastes known as the Ganji Bár, or "bald uplands," situated

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The Lower Bári Doáb Canal.

mainly in the Montgomery and Multán Districts by making the Upper Jhelum Canal divert the surplus waters of the Jhelum to the Chenab and by making the Upper Chenab Canal pass them on to the Rávi for the purposes of the Lower Bári Doáb Canal. The head-works are at Balloke, 11 miles north-west of the Railway Station of Chánga Mánga in the Chúnián *tahsíl*, where the water brought down by the Upper Chenab Canal to the right bank of the Rávi is transferred to the left bank by a level crossing. The original project and estimate, which were drawn up in 1904 and sanctioned by the Secretary of State in 1905, were modified in 1909; work was begun in 1906, the Canal was opened in April 1913, and irrigation commenced from *kharíf* 1913.

The area in this district according to figures supplied by the Irrigation Department included within irrigation limits, is only 9,321 acres, out of which 4,984 acres are proposed to be annually irrigated, falling within 10 old proprietary villages of the Chúnián *tahsíl*. Regular irrigation, which is to be supplied partly by the Gugera Distributary, partly by the Alpa Minor of that Distributary, and partly direct from the main canal, has as yet hardly begun and awaits the opening of the Upper Jhelum Canal. The area lying to the left of the Gugera Distributary will only receive *kharíf* irrigation. The total area actually irrigated in 1914-15 was 3,047 acres.

The Upper Chenab Canal.

Some account of the place of the Upper Chenab Canal in the Triple Canal Project has been given above under the remarks on the Lower Bári Doáb Canal. Only the last mile and a half of the main canal and portions of four distributaries fall within this district, the area to be irrigated lying in a belt of 18 miles of the Chúnián *tahsíl* situated on the right bank of the Rávi. 7,566 acres are included within irrigation limits, but only 1,952 are proposed to be annually irrigated, all the area at present irrigated by wells being excluded, and only 335 acres are to obtain a supply in both harvests. Irrigation commenced in *kharíf* 1914, and the total area irrigated in 1914-15 was 733 acres.

The Upper Sutlej Inundation Canals.

The Upper Sutlej Imperial series of canals, which irrigate the low-lying land bounded on the north by the old high bank of the Beás which separates it from the tracts commanded by the Upper Bári Doáb Canal, consists, as far as the Lahore District is concerned, of the Katora, Khánwáh and Upper Sohág Canals. Their early history is given at pages 213 and 214 of the Provincial Gazetteer of 1908. The Katora Canal takes off the river Sutlej at the village of Kassoki in the Kasúr *tahsíl* about 9 miles above the Kaisar-i-Hind Railway Bridge over the river;

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The Upper Sutlej Inundation Canals.

from there it takes a westerly course irrigating from 5,000 to 8,000 acres of land in 49 villages of the Kasúr *tahsíl*, before it reaches the town of Khudián which is situated in the Chúnián *tahsil* near the Kasúr border; below this point the canal breaks up into three channels, called the Pakhoke, Atári and Chúnián Distributaries, the central one of which works more as an escape for the surplus water of the canal than as an irrigating channel, whilst the other two do a large area of irrigation in the Chúnián Hithár. To the south of the Katora Canal, in the Chúnián *tahsíl*, are the two other inundation canals, the Khánwáh and Upper Sohág, which take off the river at the villages of Jalloke and Mokal in the Chúnián *tahsíl*, about 35 and 40 miles respectively below the Kaisar-i-Hind Railway Bridge. The total area irrigated at present by these canals within the district is on the average 54,800 acres in 206 villages; more than 7-10ths of this irrigation is done by the Katora Canal; the irrigation done by the other two is chiefly the result of spill-water overflowing the canal banks, and therefore varies considerably (*viz.*, from 10,000 to 17,000) from year to year. By far the larger area irrigated by the Khánwáh and Upper Sohág is in the Montgomery District; the total mileage of distributaries in this district is 174.

Canal irrigation.

The Upper Chenab and Lower Bári Doáb are canals of very recent institution in the district; no adequate account can accordingly be given of their system of irrigation. Canal supply is regulated by the officers of Irrigation Department. In the last five years the Upper Bári Doáb Canal has, according to information supplied by the Irrigation Department, been irrigating cent. per cent. of its culturable commanded area and sometimes more, while the actual capacity of the canal has been increased from a maximum discharge of 6,500 cusecs in the year 1907 to 6,750 now. Throughout the entire upland tract of the district there are now not much more than a score of villages which do not enjoy canal irrigation; flow has been extensively substituted for lift supply and yet the evils of water-logging have been avoided despite the rise in spring level. As between villages or tracts no definite "*haq*" (or proportion of irrigated to irrigable area) has ever been authoritatively laid down and followed, and even in the Chúnián Colony where the settlers were only charged to *nahri-parta* on half their cultivated area, actually less than one per cent. now remains unirrigated. On the whole the supply is well distributed and well managed, but in the circumstances above described schemes for remodelling or alteration of outlets are difficult to work from the revenue point of view, and in 1911 the Local Government held that vested interests are not to be ignored. A more

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Canal Irrigation.

economical use of water, the abolition of the *ta'tíl* (local temporary stoppage of supply) system, which leaves much in the hands of subordinates, and a more evenly distributed supply, are the main objects of such remodelling schemes as have been executed so far. It is however always difficult to convince the *zamíndár* that alteration of outlets has not led to any reduction in matured area, as he is often incapable of understanding the fact that a reduction in the number of *nál*s allowed him is more than compensated by a rise in the level of water in the distributary, or by the widening of a channel, or by a change in the location of the outlet. He is, moreover, apt to sow a larger area than can possibly be irrigated in a season of short supply and to demand water which could be saved by a proper use of *kiáris* (compartments) and the sufficient ploughing and manuring. And, when all he asks is not given him, he is only too ready to resort to malpractices to obtain more. The proper flow of water to all channels, however small and remote, is ensured by carrying the main line of the canal and of its principal branches along the highest ridges of the country to be irrigated. The *nál* is the *zamíndár's* unit for the calculation of canal supply, and represents a round opening about four inches in diameter capable of irrigating from 25 to 50 *ghumáos*. Distribution of water in usually made from distributaries (*rájbahás*) and minors by means of masonry heads which are unlocked when it is the turn of the shareholders concerned to get water; these heads are called by the *zamíndárs moghas* or *dahánas* according as they are of two *náls* or more than two *náls* capacity and from them the water is let into *khá ls*, *i.e.*, the field-to-field channels for whose digging and clearance the shareholders in the water are responsible. Of late years iron pipes have been substituted to some extent by the Canal Department as being less liable to wilful damage than the masonry heads. Further distribution is made by smaller water-cuts opening out of the main *khál*, the water being diverted into each of such small cuts for a fixed time according to the share of its proprietors in the main *khál*. Only one of these is kept open at a time, all the rest being closed by mud embankments The shareholders usually settle for themselves in what order each shall have his turn (*wári*) at the water, but if they have any dispute over the matter, it is referred to the Canal Officer. If any shareholder takes water out of his turn by any unfair or illegitimate means, on detection he is liable to fine and has to pay double water charges on the land irrigated. The large *kháls*

The former is only adopted when the land is too high for the water to flow on to it. The people all say they prefer to get their water by flow: they think they get more of it, and *jhallárs* require four or five yoke of oxen and four or five men to work them. Also owing to the large supply of water raised by these canal *jhallárs* heavy and expensive oxen are required. On the other hand it can hardly be doubted that the *jhallár*, which leaves the water under the control of the irrigator, is much more suited to sensitive crops like cotton or red pepper or even maize.

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Canal irrigation.

The Upper Bári Doáb Canal is perennial, but has to be closed for a period varying according to the rainfall, but usually about three weeks to a month (generally about the first week in January to the second week in February) to enable a general examination to be made of the masonry works on the main line; on the branches repairs are effected during the rotational closures. The period of closure is always cut as short as possible so that crops shall suffer as little as possible.

The Sutlej inundation canals flow generally from May or June to September or October, this being the period at which the river floods are at their height. The water remains long enough generally to ripen the autumn crop and to flush conveniently situated land preparatory to *rabi* sowings; but the supply is much more precarious than that of perennial canals and the crop areas irrigated from these canals in different years exhibit considerable fluctuations. Somewhat less than half the irrigable area is sown for the *kharíf* harvest and about one-third for the *rabi*; the remaining one-sixth is made up of land here and there which for various reasons remains unsown. In the autumn rice is the principal crop sown, the unrestricted flow of water from these canals and the Hithár soil where the land lies low being well adapted to the requirements of this crop. For sensitive crops like maize, cotton and red pepper, the canal water is not sufficiently under control, consequently their united area is hardly half that irrigated for rice. For the spring crop the land is flushed early in September as a rule. A mixed crop of gram and wheat is commonly sown, because after the September flushing the land will get no moisture but that of rain. If the winter rains are favourable the wheat will yield well. If the season turn out dry something at least will be saved out of the gram. Sometimes barley is mixed with one or the other of those two crops. A considerable area also is sown with gram only.

Killabandi.

A special feature of the system of survey and supply of canal-irrigated areas during recent years has been the introduc-

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Agriculture.

Killabandi.

tion of *killabandi* both in Crown Waste, such as that from which the Chúnián Colony was formed, and in old proprietary villages to which irrigation on a large scale has been extended. *Killabandi* may be defined as the substitution of rectangular fields of the uniform size of one *killa* (one-twenty-fifth of the standard square or rectangle) each for irregular fields, some minute, some inconveniently large, into which the lands of a village are ordinarily found to be divided. In the Chúnián Colony north of the Lahore-Multán Railway a square measures 209 × 209 *karms* or 25·07 acres, and a *killa* is thus a fraction over an acre. To the south of the railway the size is 200 × 200, and a *killa* measures ·89 acre. In the Chúnián *Rávi Pár* villages a rectangle measures 200 × 180 *karms*, and in *Rávi Wár* 220 × 198. In the Lahore and Chúnián villages irrigated from the Niázbeg Extension a square measures 200 × 200, and on the Rakh Distributary 209 × 209 *karms*. The advantages of *killabandi* lie in the economical use of water and the convenience of straight water-courses and evenly-shaped fields, while, from the revenue point of view, a chess board map is easily kept up to date, boundary disputes are minimised and crop-inspection facilitated.

Cropping on *nahri* land.

The principal crops grown on canal-irrigated land in the Mánjha are wheat, gram, cotton, oil-seeds, maize, rice and fodder. The first-named crop occupies about half the total irrigable area: maize, cotton and rice between one-fourth and one-fifth. Somewhat less than one-fifth of the canal area is sown with fodder crops. The plough cattle used on canal-irrigated land are usually strong and highly priced animals, partly because it has always been the custom of the Mánjha people to keep strong cattle, and partly because heavy animals are required to plough both deep and firmly in the water-soaked Mánjha soil. One pair of good oxen can work about 13 acres of land, of which perhaps one-third will be sown for the autumn harvest and two-thirds for the *rabi*; they usually sow a larger *rabi* area than *kharíf* if they have plenty of land, but if the holding is small they sow an equal area in both. Of the *kharíf* area about 2 acres on the average are sown with cotton, one with maize and one with fodder and miscellaneous crops of which sugarcane is usually one, 2 with gram, 1 with oil-seeds and 2 with fodder and other crops. In the spring at least 4 acres are sown with wheat. On all irrigated land, whether from canal or well, some of the wheat grown is cut green for fodder. Roughly speaking the amount so utilised varies from

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(iii) Cháhi-nahri.

The inter-relation of wells and canals is important in the Kasúr and Chúnián *tahsíls*. Practically the whole of the *cháhi-nahri* area is in the low lands and wells and inundation canals work together. The canal supply very often stops before the crop is independent of irrigation and the situation is only saved, if at all, by wells; the canal, on the other hand, provides for enormous areas particularly under unmixed wheat (which is more sensitive to drought than mixed wheat and gram) the water which wells alone could not supply; and certain crops, especially fodder, can be raised on canal water alone in the *kharíf*, while the labours of well irrigation are almost restricted to the *rabi*. In the sweet water tract of Lahore and Kasúr wells work in connection with the perennial canal.

System of cultivation on irrigated lands.

On well-irrigated lands rotation of crops and fallowing are attended to more or less. If there is a large enough area attached to the well as in the Sutlej-Hithár, the people like to leave one-third or one-fourth of the land vacant, so that all the land gets a rest once every three or four years. In the Rávi estates the well areas are small; consequently fallowing is seldom practised and more reliance is placed on manuring. Maize is the chief crop to be considered on well lands, first because it is the staple on which the people depend for their winter food, secondly because it requires more careful cultivation than any other. If land be plentiful the maize area is changed nearly every year, otherwise it will remain the same for many consecutive years. Whether changed or not, the maize land is always manured more or less; consequently it is followed by a spring crop, usually some kind of fodder. Occasionally wheat follows maize, but if so the wheat crop is certain to be poor. Generally speaking wheat is sown in land cropped once only in the year. Rice is nearly always sown in the same land year after year because the soil selected for rice cropping is usually low and clayey, and in the Hithár the rice land is often so saline as to be fit for no other crop but rice. Cotton is generally sown in fallow land from which *jawár* or *chari* has been cut six months before: sometimes it is sown in wheat land after a slight manuring. Cotton like maize is usually followed by some inferior fodder grass which is sown in the standing crop. The extent of double-cropping on well lands depends entirely on the amount of land in the holding and on the manure available. In the Hithár for instance, double-cropping is almost limited to fodder crops following cotton or maize. In the Rávi villages, where land is very limited, three or four crops are taken off the land sometimes in the year. Cultivation on canal-irrigated land in this district is on a broad and lavish scale. Rice is

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System of cultivation on irrigated lands.

generally sown in the same land year after year: maize may be sown in land last cropped with wheat, but must be manured first. With this exception wheat land as a rule is kept free of other crops. Cotton is sown either in fallow land, or in land from which a gram crop has just been cut as the gram leaves are supposed to manure and strengthen the soil. In many parts of the Mánjha, where maize and sugarcane can be grown, cotton is not sown except by cultivators who have plenty of surplus land.

The double-cropping on canal lands is :—rice followed by gram, which is generally sown immediately after the rice is cut, while the land is still moist from the rice irrigation: maize followed by fodder crops for which often a second manuring is done; and cotton followed by inferior fodder grasses.

Occupiers' rates.

The following are the rates charged for the various crops under the schedules in force on the various canals, *viz.*—

I.—Upper Bári Doáb Canal.

Class.	Crop.	Rates per acre. Flow.	Rates per acre. Lift.
		Rs. A. P.	Rs. A. P.
I	Sugarcane	7 1 0	3 8 6
II	Rice	6 0 10	3 0 5
III	Orchards, gardens, tobacco, vegetables and melons	4 8 8	2 4 4
IV	All dyes, fibres and oilseeds, all *rabi* crops except gram and *masar*.	3 12 6	1 14 3
V	All *kharíf* crops not specified above, gram and *masar*, all fodder crops.	2 12 5	1 6 2½
VI	Special rate, a single watering before ploughing for *rabi* followed by a *rabi* crop.	2 0 4	1 0 2
VII	A single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest. Crops sown on the *wadh* of a previous crop ...	1 0 2	0 8 1

20th August for the tillage of land for the following *rabi*. Under the orders conveyed in Punjab Government letter No. 126 Revenue, dated 24th August 1911, the charge is in future to be remitted if the watering is followed by a *rabi* crop.

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II.—Upper Sutlej Inundation Canals.

Class.	Crop.	Rate per acre. Flow. Rs. A. P.	Lift. Rs. A. P.
I	Rice gardens and pepper	3 4 0	1 10 0
II	Cotton, sugarcane, melons, *til* and hemp	2 4 0	1 2 0
III	All other *kharif* crops	1 4 0	0 10 0
IV	All matured *rabi* crops, plantations and vegetables.	1 0 0	0 8 0
V	Failed *rabi* crops and grasses	0 8 0	0 4 0

III.—Lower Bári Doáb Canal and IV.—Upper Chenab Canal.

Class.	Crop.	Rate per acre. Flow. Rs. A. P.	Lift. Rs. A. P.	Per
I	Cane and water-nuts	9 0 0	4 8 0	Crop.
II	Rice	7 8 0	3 12 0	Do.
III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, melons and wheat.	5 0 0	2 8 0	Orchards, gardens per half year, rest per crop.
IV	Cotton fibres, dyes (other than indigo) oilseeds and all *rabi* crops except wheat, gram, *masur*, *senji*, *maina* and turnips.	4 0 0	2 0 0	Crop.
V	All *kharif* crops not otherwise specified.	3 0 0	1 8 0	Do.
VI	(*a*) Gram, *masar*, *senji*, turnips, and *maina*. (*b*) Crop grown on the *wadh* of a previous crop. (*c*) Single watering before ploughing for *rabi* followed by a *rabi* crop, to be applicable only to channels selected by the Local Government.	2 4 0	1 2 0	(*a*) crop (*b*) and (*c*) acre.
VII	Grass, village and district board plantations :—			
	For any number of waterings in the *kharif* season.	1 4 0	0 10 0	Half year.
	For one watering in *rabi* season	1 4 0	0 10 0	Do.
	For two or more waterings in *rabi* season.	2 8 0	1 4 0	Do.
VIII	(*a*) Single watering before ploughing not followed by a canal irrigated crop in the same or next harvest. (*b*) Hemp (*san*) and indigo which has been ploughed in as green manure before the 15th September.	0 8 0	0 4 0	Acre.

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(iv) *Ábi*

The land treated as *ábi* in the recent Settlement is of a very special kind, *viz.*, that land situated in the near neighbourhood of Lahore City which derives irrigation, or more correctly liquid manure, from the City Sewage System. There is no real *ábi* land in Kasúr and Chúnián. The sewage is lifted by means of *jhallárs* and the land also receives water from wells. *Ábi* land is the richest of all the classes and is reserved for intensive market-gardening, growing all the best vegetables for the Lahore market and being cropped at least two or three times a year. It rents as high as Rs. 77 round per acre, but has to pay an *ábiána* rate of Rs. 18 and Rs. 14 per *ghumaon* for flow and lift, respectively.

(v) *Sailáb.*

On the Sutlej only about 7 to 10 per cent. of the *sailáb* area is now grown to *kharíf* crops. About 45 per cent. of the spring crop is wheat, and 33 per cent. gram. In the autumn about 7 per cent. is *másh*, and *masar* is also grown. Other crops are unimportant.

In the Rávi Bet land, half the *sailáb* area is given up to wheat. The better class of Rávi wheat is famous for its excellent yield and quality, this being grown in low alluvial depressions where the thick deposit soil receives regular inundation. New land however is often sown with wheat, this being looked on as the test crop to show the quality of the soil: it gives a very poor outturn for the first year or two. A fair amount of maize is grown on the Rávi flood lands, but the yield is only middling. Other crops occupying any area of importance are barley, gram, *másh* and fodder crops. *Sailáb* land is never manured; but it requires frequent ploughing to keep down the weeds. For wheat the land should be ploughed eight times, three times before the floods come and five times afterwards in September. For other crops three or four ploughings are required. Sowings in *sailáb* land are done after the summer floods have subsided. Rice (*dhán chhatta*) however is sown in new land during April or May before the floods have risen.

(vi) *Báráni.*

With artificial irrigation cultivating operations can be carried on more or less briskly all the year: unirrigated land in this district can only be cultivated after a fall of rain: without that the soil is too hard to plough. Generally a few thundershowers fall in March or April and advantage is taken of these to plough land and sow cotton dry. Whenever rain falls in April, May or June, ploughing is done on unirrigated land as

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(vi) *Báráni.*

late spring crops. The great object is to have enough land ploughed at least once before the July rains burst. Then a second ploughing is done and *jawár*, *chari* or *moth* is sown according to the nature of the soil. When all the land required for autumn crops has been sown or when the sowing time is past, any other rainfall that occurs in July or August is utilised to complete *rabi* ploughings, and industrious cultivators roll the land after ploughing it and press it down so as to retain as much moisture as possible for the *rabi* sowings: these are usually done in September. Gram and rapeseed are sown first, wheat and barley a little later; for wheat all the lower lands in which most moisture has remained are generally reserved. The term *dofasla-dosála* so well known in other districts more fortunate in their rainfall is not in common use here; but in practice the two years' system is followed as far as possible. That is starting from the month of June with which the agricultural year commences the cultivator sows such sufficient area as he can make ready for the *kharíf*, reserving of course some of the land in his holding for *rabi* sowings. The former is reaped in November and then the land is probably left fallow until the following summer when if the rains are favourable it is prepared for a *rabi* crop. Land sown dry for the *rabi* in September is harvested in April and, if possible, is sown again for the following *kharíf* harvest. In this way assuming the rainfall to be propitious, from June in one year to June two years after one *kharíf* crop and one *rabi* crop are sown. During the time between the harvesting of the one and the sowing of the other the land lies fallow the first seven months, and is in course of preparation for the *rabi* for four months The period ends with the *rabi* crop, which again, if the rotation can be strictly preserved, should be followed immediately by a *kharíf* crop. The chief points of importance, however, to be noticed in respect to the unirrigated cultivation of this district are the immense fluctuations each year in the cropping and the enormous area which is sown and fails from drought Generally speaking if the summer rains are favourable for autumn sowings they close early and a very large proportion of the sown crops fail. Again if the autumn rains are favourable for spring sowings then the winter rains often fail.

The following table illustrates this by showing the maximum, minimum and average areas for sown, matured and failed crops on unirrigated land during the 20 years preceding the recent settlement:—

CHAPTER II.—B.

Rents, Wages and Prices.

(vi) *Báráni.*

	Maximum.			Minimum.			Average.		
	Sown.	Matured.	Failed.	Sown.	Matured.	Failed.	Sown.	Matured.	Failed.
Kasúr ...	274,115	265,338	8,777	4,79,223	21,770	26,153	161,089	120,678	40,411
Chúnián ...	185,900	137,788	21,112	33,820	10,904	22,916	123,327	93,647	29,680
Lahore ...	177,988	159,531	18,457	43,000	12,482	30,518	111,073	79,573	31,500

N.B.—The figures are for *báráni* and *sailáb* land.

Section B.—Rents, Wages and Prices.

Rents.

(a) The district is essentially one of small peasant proprietors, though there are tracts, as in the Chúnián Mánjha and Bet Bangar circles, where large holdings have been acquired during the last settlement by the purchase at auction of Government waste. There are also everywhere substantial properties to be found among the more important families. Tenants are mostly drawn from the peasant proprietor class. The pitch of rents depends mainly on the strength or weakness of the owner's position. Rents lower than the normal, both in kind and cash, are generally privileged ones taken by owners who have migrated to the Canal Colonies or abroad leaving their home lands in the charge of relatives at a nominal figure. Thirty-seven per cent. of the rented land is let on kind rents. These rents, the popularity of which has considerably increased since last Settlement owing to the greater security introduced by improved canal irrigation, though sometimes more difficult to collect than rents in cash, give the owner a share direct in the profits due to the rise in prices. Tenants free of rent are usually trespassers or persons who have been wrongly recorded as owners.

The following is the distribution of true cash and kind rents in the various tahsils :—

—	Percentage of the total area under cash rents.	Percentage of the total area under kind rents.
Kasúr *tahsíl*	8·3	31·1
Chúnián *tahsíl*	6·4	43·4
Chúnián Colony	2·5	19·2
Lahore *tahsíl*	11·9	36·6

CHAPTER II.—B. Rents, Wages and Prices. Zabti.

Zabti rents are taken to some extent on canal lands in the Mánjha Circles of the Lahore *tahsíl*, and are liked by large non-resident land-holders; in Kasúr they are negligible; and in Chúnián they practically do not exist.

Ijára.

"Market garden lands in the Lahore Circle are often let on the *ijára* form of tenure. The owner cultivates the land, irrigates it, and provides the necessary manure; the *ijárádár* puts down the manure, provides and plants the seed, weeds, watches, takes over and markets the crop, paying the owner cash rates per *kanál* for periods ranging from a single crop to a year or more. The rates vary considerably according to the class of the crop, the quality and position of the land and the amount of cultivation bestowed; for potatoes and the most valuable sorts of vegetables as much as Rs. 25 per *kanál* may be paid and for inferior crops as little as Rs. 10" (Lahore Assessment Report, paragraph 38).

Kind rents—*Chakota*.

In the Lahore *táhsil chakota* rents are favoured by absentee land-lords of the money-lender type, as being more certain of realisation than *batái*. They are roughly equal to one-third *batái*. In Chúnián they amount to about ¼th of the gross produce, and are chiefly paid on *cháhi*, being taken on only 70 acres in the whole *tahsíl*. In Kasúr they are mostly paid in the Mánjha Mitha on *nahri* lands, wheat is the crop on which they are chiefly taken, and 5 maunds per acre is the rate commonly paid.

Batái.

The following quotations from the Assessment Reports will show the prevailing rates of *batái* :—

Chúnián

"The highest rate of one-half is almost confined to the Mánjha and Hithár-Uttar, where it is taken mostly on *nahri*, but to a very limited extent on *báráni* also, the owner in the latter case supplying half of the seed. One-third *batái* rents are commonest in the Mánjha and Rávi, where they are chiefly taken on *nahri* and *sailáb*, respectively; they are rarest in Dabh. A considerable area has passed from one-third to one-fourth *batái* in Dabh; there has been, however, no actual reduction in the amount of rent taken, as compensating additions have been made to the one-fourth rate in the matter of *málikána* and the transfer from the landlord to the tenant of the liability for water-advantage rate: the change is chiefly due to the extension of canal irrigation and the reduction of *báráni* and *sailáb*, which are the classes on which the one-third rate is paid. *Batái* one-fourth, taken on all the superior soils, is commonest in Hithár

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Rents, Wages and Prices.

Chúnián.

and Dabh (where, however, the additions including tenants' liability for clearance of water-courses, are also considerable) and rarest in the Mánjha, but in the latter circle there is still a large area irrigated by canal *jhallárs* and *bárání* at this rate. One-fifth, which is the common *cháhi* and *cháhi-nahri* rate in the Sutlej Bet, is hardly known in the Mánjha, and is rare in the Rávi, except where waste is being broken up for cultivation."

Lahore.

"There is a large area in all circles under one-half *batái*; in the Lahore and Mánjha Mitha Circles this is the commonest rate, being chiefly taken on *nahri* in the Mánjha Mitha. With one half *batái* on canal lands and on *ábi* in the Lahore Circle the owner commonly pays half the *abiána* and sometimes provides half the seed, the custom in this matter having been simplified since last Settlement. A few acres, in the Lahore Circle only, are under two-thirds; this is garden land held on special conditions. One-third is the commonest rate in most circles, especially on canal lands in the Mánjha Khára : the largest area under one-fourth is to be found in the Mánjha Khára, where this is the rent on land supplied by lift from canals; it is also a fairly common rate for well land in the Lahore and Bet Rávi and Mánjha Khára circles."

Kasúr.

"On *nahri* land one-half and one-third are the commonest rates; on *cháhi* one-fourth, the landlord finding no manure or water; on *sailáb* one-third; on *báráni* one-third; and, where the tenant has done anything, such as embanking, to improve the quality of the land, one-fourth."

Wages—Urban.

(*b*) The district contains, in Lahore, probably the most important labour centre in the province. Amritsar has always been considered the trading centre of the neighbourhood, but that Lahore now attracts labourers from all the surrounding country and especially from Amritsar has been shown in Chapter I.-C. in the remarks upon migration. In any case the existence in Lahore of the great Crown workshops of the North-Western Railway, the number of whose operatives, skilled and unskilled, runs into thousands would be a sufficient basis for a claim to importance as a labour centre. But Lahore contains, in addition, some forty other printing presses, mills and other factories of which a full list will found in Table No. 28 of the Statistical Volume.

A survey of the wages current in the Punjab was held in December 1912, and the following table shows the daily wages

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Rents, Wages and Prices.

Urban.

in annas of certain classes of workers, which were at that time found to be current, compared with the figures for 1909 :—

Year.	Various classes of skilled labourers.					General unskilled labour.
	Workers in iron and hardware.	Brass, copper and bell metal workers.	Carpenters.	Cotton weavers. Hand industry.	Masons and builders.	
	As. P.	As. P.	As. P.	As. P.	As. P.	As. P.
1909 ...	12 0	20 0	14 0 to 16 0	3 6 to 5 0	14 0 to 16 0	*5 6 to 7 0
1912 ...	16 0	16 0	17 0	5 0 to 8 0	14 0 to 18 0	*6 0 to 8 0

*The lower rates are generally paid in cotton mills and the higher rates in workshops where the work is heavy.

Wages in Lahore have been rapidly rising for the last few years. The following table shows the average rates of wages paid to the largest classes of labour employed in the Railway Locomotive Workshops at intervals of five years from 1886 to 1911 :—

In January of	Skilled Labour.				Unskilled Labour.	
	Fitters.		*Carpenters.*			
	Daily.	Monthly.	Daily.	Monthly.	Daily.	Monthly.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1886 ..	·51	13·3	·55	14·35	·2	5·27
1891	·58	15·75	·59	16·93	·24	6·61
1896	·48	13·08	·49	13·17	·21	5·63
1901	·45	12·29	·46	12·43	·25	6·76
1906	·51	13·79	·53	14·37	·26	7·09
1911	·66	17·23	·96	24·92	·35	9·12

The rapid upward trend of these figures since 1901 is to be ascribed to a variety of causes, amongst them being the

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Urban.

extraordinary demands which were made on the local labour market during that period. The North-Western Railway themselves doubled various sections of their metals, notably from Lahore to Ambála; the great canal project comprising the Upper Jhelum, Upper Chenab and Lower Bári Doáb Canals known as the Triple Canal Irrigation Scheme was put in hand, and drew largely on the local supply of workers; and more recently in Lahore the great King Edward Memorial project was undertaken and still further increased the demand for labour. In addition the new colonies and other centres of activity, commercial and industrial, attracted large numbers of labourers and artizans, and the tendency of the prosperous *zamíndárs* to replace their old mud houses by brick and masonry buildings is still further tending to put up the rates of wages. It has also been found that the ravages of plague and malaria, which were especially severe upon the humblest classes, is another contributory cause of the rise, and the increased facilities of communications have rendered labour more mobile and readier to wander abroad to find the best markets for itself. Finally the rise in the general standard of living has not left even the menials unaffected, and with the social awakening has come a spirit of greater independence.

Rural.

In the rural tracts wages are lower, but there has been the same general rise due to the causes just enumerated. During the preliminary survey of wages held in 1910 it was estimated that in the Lahore *tahsíl* all classes of labour were receiving in 1909 about three times the wages they were getting in 1889: in Kasúr ordinary labourers' wages had doubled, and those of carpenters, masons and ploughmen increased by about 50 per cent., in the same period: in Chúnián in 1889 labourers got one-third, carpenters two-sevenths, masons three-eighths and ploughmen one-fourth of what they were getting in 1909.

Kind wages.

Village labour can be paid in two ways. Either the labourer, menial or artisan is kept and clothed by the *zamíndár* and given a fixed proportion of the produce of each harvest, or else he is paid by the day. Of the former class the most common is the ordinary farm labourer, or *athri chúhra*, who is the regular ploughman, and folds the cattle and spreads the manure. He is usually kept and paid by one master. The ordinary *chúhra*, or scavenger, on the other hand, renders assistance in the fields once or twice a week to each of the three or four cultivators who patronise him.

Other village artisans who are paid in kind are the carpenter, who makes and repairs the ploughs and other agricultural implements, the wood work on the Persian wheels, carts, cart-

wheels and such articles of furniture as are used by his master; the potter who supplies pots for the Persian wheels, or for canal water lifts, and earthen vessels for domestic use; the blacksmith, whose duty is to fix all the iron work on agricultural implements and keep it in repair, and to shoe the cart bullocks when necessary; the leather-worker who has little to do but to make blinkers for the well and plough cattle, the *chhat* or thong tied on as a whip, and to make a pair of shoes once a year for each of his patrons. These artisans also usually receive their materials free. However in estimating the earnings of these village *kamíns* it must not be supposed that they confine themselves to doing *sep*. Many take up quite different occupations, such as land-cultivation, carrying for hire, &c., and some combine their *sep* work with other methods of making a livelihood.

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Kind wages.

Other village menials are paid in kind for services rendered, such as the water-carrier, the village minstrel, and the barber. Also *faqírs* and Brahmans are not forgotten. The separate amount each class receives is small, but taken altogether these payments mount up and form a heavy charge on cultivation. Menials' dues are paid generally from the common heap before the division of the produce; on the well area in the case of *cháhi* and *cháhi-nahri* lands, and on the plough area in the case of *nahri*, *sailáb* and *báráni*. They are not taken on all crops, and not on all classes of soil. The *athri chúhra*, who is a full-time servant, has been found on enquiry to take 10 per cent., the sweeper who only winnows and ploughs 5 per cent. The smith's share on well lands in only half that of the carpenter and potter. It has not been found that any addition to customary dues is made in cash, but *zamíndárs* occasionally oblige their menials by making them small loans free of interest, and by feeding their cattle for them.

Cash wages.

The following table shows the typical cash rates paid to various classes of rural labour in Lahore in 1909 and in 1912:—

Year.	Unskilled labour by the day.	Carpenter by the day.	Blacksmith by the day.	Mason by the day.	Ploughman by the month.
	A. P.	A. P.	A. P.	A. P.	Rs. A.
1909 ...	5 0 to 6 0	12 0 to 16 0	16 0	16 0 to 20 0	6 0 to 8 0
1912 ...	5 0 to 8 0	12 0 to 18 0	16 0 & 18 0	16 0 to 22 0	7 0 to 10 0

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Prices.

(*c*) The prices of the staple food-grains in Lahore rule high. The district yields to none in the excellence of its communications, the vitality and abundance of its markets, and the assurance which the sufficiency of the irrigation system affords the *zamíndárs* of profiting by high prices when they come. The district is compact and well served by railways, the new Patti-Kasúr-Lodhrán Branch opened in 1907 supplying an artery in the south parallel to the Lahore-Karáchi line in the north. Two other main lines, *viz.*, the Pesháwar-Delhi and Lahore-Ferozepore, serve the eastern and western portions of the district respectively. In addition there is an abundance of *pakka* and *kacha* roads. Lahore, the head-quarters of the province and the focus of the railway system, is a market of the first magnitude. Kasúr is an old established centre of trade, and derives considerable added importance from the new branch of line. Ráewind, the junction for Ferozepore, is an important place. Pattoke and Kot Rádha Kishan minister to the Chúnián Colony. Patti attracts a large proportion of the surplus produce of the Tarn Táran *tahsíl* of the Amritsar district and Khudián does a brisk trade. Altogether the district is thoroughly well developed, and no portion of it is so isolated that the prices current in it will fall much below the average rate for the district.

Rise of prices.

Since the last Settlement the price of staple food-grains has risen greatly, as will be seen from the commutation prices sanctioned at the Settlement of 1892-93, compared with those allowed for the present Settlement:—

Prices in annas per maund.	*Moth.*	*Másh.*	Cotton.	*Til.*	Maize.	Rice.	*Jawár.*	Wheat.	Gram.	Barley.	*Sarson.*	*Toria.*
Last Settlement ...	21	24	53	40	19	21	18	24	18	18	32	Not taken.
Present Settlement ...	40	44	92	75	30	32	30	38	28	25	58	58
Rise, per cent. ...	90·5	76	73·6	87·5	57·9	52·4	66·7	58·3	55·5	38·8	81	...

However, these prices were not estimated in the same manner at the Settlement of 1892-93, the prices then sanctioned being based mainly on those prevailing in the village bazars of the district during the term of the preceding Settlement. In the

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Rise of prices

present case the commutation prices were fixed after consideration of all the different sorts of data which obtain, *i.e.*, the prices published in the Gazette, the entries in the Circle note-books, sales by *zamindárs* to village shop-keepers other than their creditors, sales at *mandís*, and sales through *árthis*. Prices obtained by a small agriculturist depend a great deal on whether he is in debt, or entangled by a *bania* creditor If he is in a position to sell by a free contract to a shop-keeper who has no hold over him, he will probably gain about a *ser* in the rupee.

Though the commutation prices, being arbitrary by nature and pitched low of set purpose, do not necessarily represent the actual prices, yet the effective rise calculated only on the main staples and leaving out of account the fodder, fruit and vegetables of both harvests, which together amount to about one-fifth of the total crops, will still be found to be great In the Lahore *tahsíl* it amounted to nearly 48 per cent. on a comparison of the Gazette prices of the ten years preceding this and the last Settlement. The figures for effective rise of prices in Kasúr and Chúnián worked out by the same method were 39 and 35 per cent. respectively.

The Lahore *tahsíl* by virtue of its situation and excellent communications is better able than any other to take full advantage of the profit arising out of increased prices. Chúnián is less favoured than Kasúr in the matter of communications ; the extensive Sutlej-Hithár has only recently been provided with a railway, and even the best of the roads there are for long stretches deep in sand. The north bank of the Rávi is also handicapped by the distance from markets and the decline in river and road traffic.

Causes of rise in price. Effect of communications.

One of the chief causes of the rise in price of food-grains is no doubt improved communications coupled with the fact that India is becoming every year a more important factor in the world's markets. Every mile of railway and road newly opened brings some fresh village within comparatively easy access of those markets and enables it to enjoy to the full the effect of a short harvest in the Argentine or Canada. The famine terror, too, has largely abated. Years of scarcity may come and prices may rule higher than wages, but owing to the improvement in communications and the extension of canal irrigation it would seem that absolute famine in the Lahore District is a thing of the past. Figures showing the increase which, allowing for the loss of the Sharakpur *tahsíl*, has taken place in the cultivated area of the district and kindred statistics will be found in tables

Effect of famines.

Extension of cultivated

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Extension of cultivated areas.

1, 18 and 19. The total cultivated area of the district has increased by 16 per cent. and the total harvested area by 25 per cent. Canal irrigated land has increased by over 350,000 acres. All these factors tend to increase the prosperity of the *zamíndárs*, and are in fact an outward sign of that prosperity.

Material condition of the people.

(*d*) Many factors have been at work in the last few decades which have effected far reaching alterations all in the direction of material progress in the condition of nearly every class. Chief amongst these have been the relaxation of caste restrictions and the disturbance of hereditary occupations; the progress in co-operative methods which aim at the development of individual effort through collective action; the opportunities for industrial employment; the briskness of the labour market; the work of reform societies such as the Árya Samáj, which both elevate the lowest and no longer seek a position of unassailable supremacy for the highest; the introduction of the Western ideals of efficiency before rank, especially in the service of Government; the incentive offered to industry and frugality by the weakening of the coparcenary system; and the great rise in wages and charges for specific services.

The cultivator.

The chief sharer of the new prosperity is the peasant. The yeoman of the Punjab is enterprising by nature and has turned to excellent account all the modern liberalising tendencies. His traditional land hunger has been, if not appeased, at least allayed by the grant of virgin lands in the colony, and his ancestral acres have acquired the additional boon of artificial irrigation from Government canals at charges which leave him substantial profits. A large enhancement has occurred in the value both of land and of its produce. He is, when his holding has become insufficient for his needs, ready to turn to occupations other than agricultural, taking service in the Army, Police, or Civil Departments, and emigrating to America, South Africa, China, or wherever he thinks he can save enough money to make him comfortable when he returns. The rise in his standard of living has been remarkable. Silver jewellery has been discarded for gold, which is worn in the form of necklaces even by smart young men; fine weaving fabrics, muslin, chintz, long-cloth and the like have supplanted the old coarser homespun materials; present day houses are better built and are equipped with clocks, enamelled plates and tumblers, metal cooking dishes, European kerosine oil lamps, and many other such comfort-giving appliances. Each family now keeps its goods and chattels in a wooden box, or a steel trunk, instead of in the old cane-basket. Looking

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glasses, knives, scissors and other imported articles abound everywhere, and it is no uncommon occurrence for the evening hours to be enlivened by the strains of an American gramophone.

The cultivator. The landless day labourer.

The position of the landless agricultural labourer has already been discussed to some extent in connection with rents and wages and the position of the agricultural menial. As a class, however, the landless labourers are not numerous in the district, which is one of small proprietors, who themselves supply a large proportion of the tenant body: they are found mainly in the Riverain Circles, where they are known by the name of *adhjogia*, because they use the owner's oxen. Nevertheless in common with other classes they have shared the general prosperity and are now able to demand competition wages where before they worked at customary rates. The wages of the urban labourer have already increased during the last few years, and the keen demand for their services has led to a proportionate share in the enhanced prosperity.

The middle class clerk.

There is one class, however, which has not had its full share of the good things. The middle class clerk has had to watch the standard of living of his equals growing more rapidly than his own income. The effect of this has been that, whereas the style of his dress has perforce improved, the improvement has been at the expense of his lodging and of his food. His growing fastidiousness in the matter of dress is perhaps not so much the outcome of necessity as of a real desire to emulate his superiors, especially in the matter of the European fashions. Consequently he does not aspire to the fine fabrics of the agriculturist, but does his best to look tidy and up-to-date in machine-made cloth imported from Europe, supplemented in part by inexpensive silk and *tassar* made at Benáres, or in Assam, China or Japan, and in part by *pattis* manufactured in Kashmír. But neat "European" clothes he must have, and to go for a walk after office hours dressed like his father or grandfather in a loose *kurta*, *kurti* and *dhoti*, would expose him to a fire of ridicule from his fellows which he would not face. Far rather would he be nicknamed by the wealthy trademan "a *bábu* with clean clothes and empty pockets." The same change is visible in the cloths of his woman-folk. Thick and durable silk clothes manufactured at Lahore, Amritsar or Jullundur have been replaced by cheaper white muslins and prints imported from Europe, or by fancy silks from China and Japan. The *ghagra*, the fine old gold and lace embroidered petticoat, is dying out, and its place is being

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Forests.

The middle class clerk.

taken by cheap but gaudy *lahngas* from Benáres or Bombay. The *kurta* has given way to the shirt, and slippers and European shoes have replaced the Indian *júti*. Open waistcoats and even stockings are now worn, while jewellery, the former sign of solid wealth, can no longer be afforded. But on the other hand the rise in the wages of labour and the price of building material has inevitably resulted in an increased difficulty in obtaining suitable house accommodation. The majority of the middle-class clerks, who are wholly dependent on their pay, have to be content with a portion of a house, which is usually small, ill-ventilated, scantily furnished and situated in the narrowest and most tortuous alleys of the city. Nor is his food of a much higher quality. Indeed it is in this direction, unfortunately, that the Hindu clerk at any rate practises his most rigid economy. Few eat meat, or even eggs, and spices they must perforce abjure. Their food is usually *chapátis* and *dál*, with perhaps a little pickle, or some milk, or some indigestible form of cake fried in oil. But food like this is not nutritious, and in the past it was supplemented by plenty of milk and *ghi*. Now, however, owing to increased rents and the higher cost of grain and fodder milk-sellers can no longer keep their cattle in the city on a large scale, and the prices of milk and *ghi* are becoming prohibitive. The Muhammadan clerk does not stint himself so much in his food, and his economies have to be practised in other directions. However, he can ill afford to engage servants, and his food is either cooked by his own woman-folk or bought at one of the baker's shops which are rapidly springing up in all parts of the city.

Section C.—Forests.

Distribution, areas and management.

Since the preparation of the last Gazetteer the area of the Lahore District forests has considerably decreased on account of the transfer of Sharaqpur *tahsíl* to Gujránwála, and the colonization of *rakhs* in the Chúnián *tahsíl*. The total area of the forests in the district, details of which are given in table 27 of the statistical volume B, is 61,344 acres, of which 34,164 acres are reserved and the balance unclassed. Of the Reserved Forests 21,875 acres are under the management of the Forest Department, and 12,289 acres under the Military Department. Of the Unclassed Forests the Forest Department manages 14,809 acres and the Deputy Commissioner 12,371 acres. The average total net surplus of revenue over expenditure for 1911-12 to 1913-14 of the forests under the Forest Department in the

Distribution, areas and management.

Lahore District came to Rs. 1,22,025. The following statement shows the total areas according to *tahsíls*:

TAHSIL.	RESERVED FORESTS		UNCLASSED FORESTS		TOTAL.
	Under Forest Department.	Under Military Department.	Under Forest Department.	Under Military Department.	
Chúnián	12,139	...	9,250	8,541	29,930
Lahore	9,736	12,289	5,559	3,433	31,017
Kasúr	...	...	..	397	397
	21,875	12,289	14,809	12,371	
Total ...	34,164		27,180		61,344

In the Chúnián *tahsíl* there is only one Reserved Forest, namely Chánga Mánga Plantation, 12,139 acres in area, of which 9,129 acres are planted, the balance remaining unplanted owing to the difficulty of irrigating it. There are also unclassed forests, area 9,250 acres, in this *tahsíl* under the Forest Department. In the Lahore *tahsíl* there are seven Reserved Forests, 9,736 acres in area, and 8 Unclassed Forests, 6,559 acres in area, under the control of the Forest Department.

Description of the various forests.

Reserved Forests under the Forest Department are of three kinds,—*viz.* (*i*) irrigated plantations, (*ii*) *sailába* plantations, (*iii*) ordinary *rakhs*. In the irrigated plantations *Shísham* (*Dalbergia Sissoo*) and mulberry and in the *sailába* plantations *Shísham* are the prevailing species, but mulberry (*Morus alba*), *Kíkar* (*Acacia arabica*), and *Phulái* (*Acacia modesta*) are also found. In the ordinary *rakhs* and Unclassed Forests *Jand* (*Prosopis spicigera*), *Karír* (*Capparis aphylla*) and *Reru* (*Acacia levcophlœa*) are the common species, though *Shísham*, mulberry, *Kíkar*, *Phulái*, *Farásh* and *Wán* are also found here and there. *Munj-kána*, *Kahi* and *Pilchi* are found in *sailába* plantations. Grasses such as *Garm*, *Chhímbar*, *Palwan*, *Dháman* and *Panni* are common in all the forests.

CHAPTER II.—C.

Forests.

Special plantations—(i) Irrigated.

Chánga Mánga irrigated plantation, covering an area of 9,129 acres, is situated 44 miles south-west of Lahore in Chúnián *tahsíl* on the Lahore-Karáchi Railway line. It was started in 1870. Originally *Shísham* was sown, but mulberry has come in naturally and now forms nearly 70 per cent. of the crop. The plantation is worked on a coppice with standard system, with 15 years' rotation, and the yield in logs and fuel is removed by means of a portable 16″ gauge tramway and country carts to the Railway Station of Chánga Mánga. *Shísham* logs are exported to Lahore, Amritsar, Ráwalpindi, Multán, Sukkur and other places. Fuel is exported to Lahore, Amritsar, Gujránwála, Siálkot, Jullundur, Ferozepore, &c. Mulberry logs and fuel are in great demand. Logs are largely bought by Siálkot firms for the manufacture of tennis-racquets, &c., and mulberry fuel is bought by traders from Lahore and other places for the manufacture of *chárpái* legs, which are sent in quantities to the new colonies in the *Bár*. Good *Shísham* logs fetch Re. 1 to Re. 1-4-0 per cubic foot and *Shísham* fuel Rs. 10 to Rs. 12 per hundred cubic feet stacked. Mulberry logs fetch Re. 0-8 0 to Re. 1-2-0 per cubic foot and mulberry fuel Rs 7 to Rs. 9 per hundred cubic feet stacked. During the past three years ending 1913-14 the planted area of Chánga Mánga alone brought in a revenue of Rs. 5,27,038 and after deducting Rs. 2,14,428 expenditure the net surplus for three years was Rs. 3,12,610 or Rs. 1,04,203 (Rs. 11-6-8 per acre) per annum.

The Kot Lakhpat Irrigated Plantation covering an area of 1,965 acres has been started recently. It is situated on the Lahore-Ferozepore road, about 6 to 9 miles from Lahore city, and has a great future before it.

Sailába.

There are three *sailába* plantations in the district. They were started in 1879 for the supply of fuel to the North-Western Railway, but, as the Railway is now using coal, these plantations supply the market with timber and fuel :—

(*i*) *Sháhdara.*—This plantation is situated on both banks of the Rávi about 2 to 7 miles from Lahore. Its area is 1,815 acres, of which 1,578 acres are wooded and the balance is either under water or covered with *Munj-kána* and *Pilchhi.* It is also worked on a 15 years' rotation. The method of fellings is the same as in Chánga Mánga, *viz.*, coppice-with-standards. *Shísham* logs and fuel are sold *in situ*, and the Lahore traders buy them every year and cart them to the market in Lahore. Permits are issued for grass to the general public at Re. 1 per mensem for

CHAPTER II—C. Forests.

one head-load daily. Buffaloes and cows are allowed to graze in certain compartments on monthly payments. During the past three years ending 1913-14 the revenue realized amounted to Rs. 52,765 and the expenditure to Rs. 6,479

(*ii*) *Sailába.*

(*ii*) *Jhok* and (*iii*) *Sadánwáli* cover an area of 3,459 acres, of which 1,602 acres are wooded and the balance either under water or covered with *Kana* and *Pilchhi.* They are situated on the banks of the Rávi about 10 to 20 miles below Lahore. These are shortly to be brought under systematic working, when they are expected to yield a revenue about Rs. 50,000 per annum for the next five years.

The *sailába* plantations, on account of the growth of *Kána,* are liable to damage by fires and special arrangements have to be made both in the way of cutting fire lines and employing watchers during the fire season.

Ordinary *rakhs.*

The ordinary *rakhs,* whether Reserved or Unclassed, are chiefly used for grazing purposes. Dead and wind-fallen wood only is sold from them. Some of the *rakhs* are reserved for the camel corps stationed at Lahore Cantonments and some of them are used by military camels on the line of march. Grazing leases are sold each year jointly by the Civil authorities and Forest Department, and as a rule the agriculturists of the neighbourhood are given preference over outsiders in the disposal of leases. The annual grazing and grass revenue from the *rakhs* comes to about Rs. 7,500 on an average. Forests under the Military Department are used for grazing and raising fodder crops, &c. Grazing is also allowed to the villagers on payment. The Unclassed Forests still remaining under the Deputy Commissioner are leased for grazing, &c.

Relation with the people and supply of local needs.

There are no rights of user (rights of way excepted) in any forest under the Forest Department. In Mudki Unclassed Forest, in the Chúnián *tahsíl,* however, the *Mahant* of Bhái Pheru has a grazing and wood cutting concession at the pleasure of Government. During years of scarcity of fodder almost all the forests including Chánga Mánga, with the exception of compartments having young coppice growth, are thrown open to grazing. Even lopping is allowed in the *rakhs* for the benefit of the villagers' cattle. There are no restrictions whatsoever regarding the collection of edible fruits such as mulberry and berries of *Capparis Aphylla.* The latter are used for pickles. The pods of the *Jand,* which are very sweet, are eaten raw and sometimes mixed with flour during times of scarcity.

CHAPTER II—E.

Arts and Manufactures.

Relation with the people and supply of local needs.

The Chánga Mánga irrigated plantation finds employment for about 100 men throughout the year for purposes of silt clearing, irrigation, road clearing and improvement works; during the winter some 500 men are employed on felling trees, carriage of timber and fuel to the sale depôt; and over 50 men and 25 pairs of bullocks are daily employed on the tramway. Felling and improvement works in Shahdara forest and sowing operations in Kot Lakhpat give work to over 100 coolies during the winter and hot weather. The Salvation Army undertake felling contracts in Chánga Mánga, and have also started silk rearing experiments. There is an unlimited supply of mulberry leaves, and the climate of Chánga Mánga on account of the plantation is suitable for the industry. The Salvation Army have also experimented in jam-making from mulberries, and, if they succeed in creating a market for it, the industry should become of considerable magnitude, as at present very large quantities of the fruit are wasted.

Section D.—Mines and Mineral Resources.

The district has no mines or important mineral resources. *Kankar* and *shora* have been referred to in Chapter I. The last Census Report showed only 5,536 persons engaged in quarrying or in the extraction of saltpetre, alum, &c.

Section E.—Arts and Manufactures.

Hand industries.

(*a*) In the last ten or twenty years the hand industries of Lahore District have greatly decreased in number and importance owing to many having completely succumbed to competition or change of fashion.

Those industries that are practically dead are :—

Gunsmiths and Damascene workers.
Woollen cloth weavers.
Cotton and wax cloth printers.
Pinira workers and carvers in wood.
Wood turners and *lac* workers.
Decorators and mural painters.
Kanshi workers.
Glass bangle makers.

In place of these dead crafts there are a few trades that have been introduced or have increased followers : they are :—

Tinsmiths.
Cutlers, bicycle makers and nickel platers.
Iron wire and bent iron furniture makers.

CHAPTER II.—E.

Arts and Manufactures.

Hand industries.

Silk and cotton dyers.
Bookbinders.
Iron foundry workers.
Tailors.
Sign-board painters.
Coach builders.

It is instructive to compare the two lists, which are a comment upon the trend of modern requirements. The prosperity of the following industries and also the number of workers have increased: Carpenters, furniture makers and coach builders, shoe and English boot makers, saddlers and book binders, brass, copper, iron and tin workers. The workmanship in these trades has greatly improved, especially in carpentry and boot making, which may be considered the chief hand industries of the district at this time. No important hand industry can be said to have been started. The following hand industries have one or two followers only and are of comparatively recent introduction:—cutlers, nickel platers, bicycle makers, clay modellers and casters, machine-sock-knitters.

There only remain one or two glass blowers in Lahore; their work is very poor and there is practically no demand for such work. Austrian glass bangles have largely taken the place of the native work. There are many firms properly equipped for the manufacture of vegetable oils and soaps in Lahore and the quality has greatly improved of recent years, but they are working on a very small scale, only two producing for consumption outside the district. Printing of all kinds is constantly increasing in the city and the firms doing this work are better equipped than formerly. Commercial book binding also is a very successful industry, but it has no artistic qualities or finish to recommend it. Up-to-date machinery and good taste are sadly needed, but the work done is strong and serviceable. Leather work continues to improve. The *desi* shoe maker is as flourshing as ever he was and the quality of country leather has much improved, enabling work of much better finish to be done. Saddlery, portmanteaus and shoes of English style are even made in Lahore from Cawnpore leather. The Kasúr leather industry has a great local reputation.

Cotton.

According to Latifi's Industrial Punjab there were 40,000 workers in cotton in the Lahore District in 1911 and Lahore boasted 900 weavers in the same year. Since then the numbers must have decreased, as Manchester has been a formidable competitor.

CHAPTER II.—E.

Arts and Manufactures.

Cotton.

The use of English cotton cloths has increased enormously and everywhere the handloom weavers belong to poorest classes and are at the mercy of the middleman who is ruining the prosperity of nearly every craftsman. The power industry too is slowly but surely cutting out the hand-workers. Cotton printing can still claim its adherents, but they are very few in numbers. This is a hand industry that holds its own in Madras, Switzerland and Holland and machinery cannot compete with it in price. It is hoped that the introduction of this industry into the Mayo School of Art will help to improve its designs and colour variety.

Wool.

There are said to be 4½ million sheep in the Punjab. Lahore is one of the chief wool working centres of the Punjab from whence it is exported direct to Europe and America after being cleaned, pressed and packed. Lahore appears to be chiefly a distributing centre. The woollen hand industry, Latifi says, is suffering under the heavy tax levied by the middleman and the industry suffers under the want of improved methods and appliances and the competition of shoddy machine-made European goods. Formerly this was a very important hand industry. There are still a few shops which weave for Lahore custom only. The wool comes from *dumbas* of Kábul, Tibet, Kandahár and Yárkand. It is used in four colours only, *i.e.*, white, brown, black and grey, the white being the most expensive; when it is cleaned it is called *pashm* and sells at Rs. 3 or 4 per seer. *Dhusas, chadars,* and *pashmínas* are made of it. There are only one or two shops now that embroider shawls, there being little demand for this work.

Silk.

The bulk of silk is now imported from China. Sericulture has however been taken up in some districts and the Salvation Army is doing its best to introduce this craft with some success. Foreign competition has debased and inferior silk has to a great extent killed the home industry. Only *daryáis* and *azárbands* are made now.

Metal work—Jewellery.

There are many skilful jewellers still in the *bázárs*, though they show no enterprise in adapting their talents to new requirements and the taste for the highly ornate style of native work is fast dying out. The many large European jewellery firms import all their gold and silver-ware and the native jewellery trade is suffering from the hands of the middle-man who employs labour and debases the precious metals to such an extent that Indian silver and gold work is hardly worth buying now. Some system of Hall-marking for the purpose of ensuring genuine materials and for the protection of the honest craftsman is badly needed.

Up to the present the copper and brass-smiths' work has been as much in demand as ever, but the greatly enhanced cost of these metals owing to the European war must hit these trades very badly in the near future unless the metals can be obtained from local sources. Brass casting is very little practised now-a-days. CHAPTER II.—E. Arts and Manufactures. Copper and brass.

The Punjabi carpenter is naturally one of the cleverest in the world if he cares to exercise his talents. When wood carving was generally in demand, construction work was nearly always poor: now that plain work is the vogue, much greater accuracy of fit and finish is practised. There are still a few clever carvers in Lahore and fine work is done in the Mayo School of Art, which keeps alive the craft for those few people who still want fair carving. The prosperity of the *bázár* carpenter has steadily increased with his better work. Besides these there are now many large firms turning out furniture, but in most cases the design is commonplace in the extreme and often very bad, the readily obtainable European catalogues of cheap furniture forming a trap to catch the eager seeker after novelties. The influence of the Mayo School of Art would be much greater if the demand at the present time for Industrial Teachers in the Province did not absorb all the skilful craftsmen it turns out. This is of course only a temporary loss, for when this demand is satisfied and the students from the Industrial Schools, which are increasing daily, begin to show what they can do, a very great improvement will show itself. Owing to the increased cost of living and consequently largely increased rates of wages, all decorated work, whether *pinjra* or carving, has ceased to be practised in the *bázár*. Wood work and furniture.

There has been a great increase in the number of photographic firms practising portraiture, and the demand for text books has added greatly to the number of lithographers. Since the last issue of the Gazetteer the Mayo School of Art has acquired a fully equipped Process Department for the production of line, half-tone and colour blocks for illustrating purposes. The students show great aptitude for the work, which will soon exert its influence over the local industry. Owing to the greatly increased demand for illustrated text books, there is certain to be a good opening for some years to come for all students trained in this work. Photography, lithography and process work.

Technical education is imparted in Lahore by means of the Mayo School of Art. The school as originally built in 1880 consisted of 5 rooms on the ground floor and a lecture room 62 feet by 24 on the upper. The design is described as late Technical Education.

CHAPTER II.—E.

Arts and Manufactures.

Technical Education.

Mughal. It first came into use for the Punjab exhibition of 1881, when some temporary additions were made to increase the accommodation. From the spring of 1882 the entire building has been in use for the School of Art. In 1891 it was decided to replace the temporary additions of 1881 by permanent buildings. These were designed by the Principal of the School and completed in the autumn of 1892. The new portion consists of four large well-lighted *ateliers* in which the technical work of the school is carried on. In 1902 the premises were still further enlarged and four large machine workshops and a photo.-lithographic studio were constructed under the development scheme of the present Principal.

In 1911 new workshops were sanctioned and commenced and completed in the following year at a cost of Rs. 55,000. In the same year a scheme for the development of the industrial activities of the school was drawn up by the present Principal comprising the expansion and increased pay of the teaching staff, the inclusion of new industries and modern methods and machinery in old industries, and large developments in the departments devoted to the training of drawing and craft teachers in order to meet the growing needs of the Province in this direction. Modern machinery and tools to the value of Rs. 32,387 and increased recurring expenditure was sanctioned and, of the new industries provided for, photo.-lithography process and colour block printing, jewellery, cotton-printing and book-binding have been started and the machinery shops for cabinet-making and carpentry and blacksmith, fitters' work and light metal work are in full swing.

Drawing Teachers.

The drawing teachers' department, in which in 1910 there were 15 students, now holds 66 students, and this notwithstanding the fact that the standard for general education has been raised in this class to III middle pass. Even with this number of students the demand for teachers of drawing far outnumbers the supply available each year, no other school in India appearing to compete in the thorough training of drawing teachers.

Industrial work.

On the industrial side the School of Art has taken on many important works which could not have been done anywhere else in the province. During the last five years the following are some of the principal works executed :—

Wood-carving, plaster work and interior decorations to Barnes Court, Simla, Government House, Lahore, and the Circuit House, Rawalpindi; designs for the Amphitheatre at the Delhi Durbar and the execution of decorative work, including carpets and *shámiánas* of

CHAPTER II.—E.

Arts and Manufactures.

Industrial work.

gold thread and *repoussé* metal work and designs, for the Law and Oriental Colleges ; design and decorative work in plaster for the New Railway Theatre, Lahore ; a carved console table for Government House, Lahore ; Panjabi carving for the billiard room of Bagshot Park, England, for His Royal Highness the Duke of Connaught, and eight Canon Stalls for the Lefroy Memorial in Lahore Cantonments Church.

The Industrial Schools of the Province, which in 1910 were 12 in number and now number 28, are all inspected by the School of Art. The number of students in the school during the last five years were as follows :—

1910-11.	1911-12	1912-13.	1913-14..	1914-15.
229	230	231	243	257

Factories.

(*b*) Table 28 gives a list of the forty-two registered factories of the district with the average daily number of operatives employed. There are eight Crown Factories, six of which are under the control of the North-Western Railway. The private factories are mostly concerned with cotton-ginning and pressing and the production of oil and flour. The largest of all the private factories is the Lahore Spinning and Weaving Mills at Shahdara There are six Printing Works, the most important being the "Civil and Military Gazette" and Mufid-i-'Am Presses A new power tile works (the Eureka Tile Works) has been opened near the Railway, which produces tiles for flooring purposes of excellent fit and quality, the colours being in the body of the tiles which is of intensely hard stone ware. There is one small foundry.

Large industries.

(*c*) A Leather Tan Factory has very recently been started in Sháhdara for the preparation of Cawnpore leather and leather goods. The Punjab Oil and Flour Mills, which employed 45 operatives in 1914, also manufacture soap. The district contains no paper mills, breweries, distilleries or sugar factories.

Effect of factories on migration

(*d*) The whole of the forty-two factories registered in 1914 did not employ very much more than ten thousand hands, which, compared even with the city population alone, is no very great proportion. All the same the figures for migration discussed in Chapter I C (*d*) show clearly that whatever internal movements there are in the district are from the outlying *tahsils* to headquarters, and that this is largely due to the growth of factories

CHAPTER II.—F.

Commerce and Trade.

Effect of factories on migration.

may be granted. The earnings and material condition of the urban classes of labour are considered above in Chapter II—B.

Section F. - Commerce and Trade.

Lahore.

Complete details of the Commerce and Trade of Lahore are unfortunately not available. It is well over twenty years since the Lahore Municipality ceased keeping a full record of the goods imported into, or exported from the city. The only records forthcoming are the octroi records of the municipality (given in Appendices C and D) and the traffic returns of the railway, neither of which can be said to give a full account of the trade and commerce of the city or district.

Examination of such figures as are forthcoming shows that although it cannot vie with Amritsar, in this respect, Lahore is nevertheless a great exchange. The chief imports as far as bulk is concerned are grains, articles of food and drink, and articles used for fuel, lighting and washing. Imports of great value are drugs, spices and perfumes, cloth piece-goods, articles of clothing, manufactured articles of dress and goods made of leather, metals and articles made of metal. The chief exports are the grains and the aforementioned cloth, leather and metal goods. In fact the annual value of the exports of the latter class is greatly in excess of that shown by the figures for Amritsar. Although from the Indian point of view Lahore is not so great a market as Amritsar with its trans-Himalayan connections, it can claim the first place of the province as an European trading and shopping centre. It contains the head offices of the Punjab Banking Company and important branches of the Bank of Bengal, the National Bank of India and the Alliance Bank of Simla. The Mall is lined with large European shops, some of which are local concerns and some branches of great Calcutta and Bombay business houses. It is the head-quarters of a great timber firm, and contains branches of the well-known grain exporting houses.

District.

Kasúr is a great centre of the leather trade, besides being a considerable and old established local market for agricultural produce. Other important exchanges in the district are at Ráiwind, Pattoke and Kot Rádha Kishan. Patti attracts the surplus produce of the Tarn Táran *tahsíl* of Amritsar, and Khudián also does a brisk trade.

CHAPTER II.—G.

Communications.

Imports and exports.

The following table shows the weight in maunds of goods imported and exported to and from Lahore Railway Station :—

Commodities.	A.—Imports. 1913-14.	A.—Imports. 1914-15.	B.—Exports. 1913-14.	B.—Exports. 1914-15.	Remarks.
	Maunds.	Maunds.	Maunds.	Maunds.	
Cotton (raw)	95,521	22,427	129,705	36,143	
Cotton (manufactured) ...	24,101	24,982	4,137	4,656	
Fodder and cotton seed ...	111,156	124,184	37,022	16,766	
Wheat and flour ...	337,737	405,437	33,208	61,868	
Other grains	302,281	365,196	26,946	31,290	
Hides and skins ...	126,788	88,263	110,342	89,680	
Metals	152,836	145,123	156,045	148,564	
Oil-seeds	77,702	97,440	3,697	5,359	
Salt	27,415	28,437	780	1,200	
Sugar	247,346	188,725	5,478	17,146	
Raw wool	62,147	54,170	64,701	54,245	
Miscellaneous	970,680	788,321	394,094	426,278	

Section G.—Communications.

General.

The figures given below show the communications of the District :—

Communications.

Ferries	28	
Railway	176	miles.
Metalled roads	187	„
Unmetalled roads	633	„

Table 30 shows the distance from place to place as authoritatively fixed by the Local Government.

Railways.

(*a*) Lahore is the focus of the Railways of the Province.

CHAPTER II-G.

Communications.

Railways.

The lines within the Lahore District, which are all part of the North-Western Railway system, consist of the following:—

(i) A portion of the main line from Delhi to Lahore between Wágah and Lahore;

(ii) A portion of the main line to Pesháwar north of Lahore as far as Sháhdara;

(iii) A portion of the Lahore-Karáchi main line between Lahore and Wán Rádha Rám;

(iv) A portion of the Ráewind-Bhatinda line from Ráewind to Ganda Singhwála, which forms part of an important alternative route between Lahore and Delhi, *viâ* Bhatinda;

(v) Portions of the chord lines between Sháhdara and Sángla Hill, Amritsar and Kasúr, Kasúr and Lodhrán.

(i) above was opened in 1862. It crosses the Lahore-Amritsar boundary at the village of Wágah. It formerly formed a part of the Sind, Punjab and Delhi Railway, but the contract of the Sind, Punjab, Delhi Railway Company with Government expired on the 31st of December 1884, from which date Government took over the ownership and management of the line. The line is double.

(ii) was originally constructed on the metre gauge, but was subsequently converted to the 5′ 6″ gauge and opened in October 1878. In this length is the important bridge over the Rávi, which, as originally constructed, consisted of 33 spans with a length of 3,218 feet. About 1893 fifteen spans on the right bank and three spans on the left bank were closed and the bridge was reduced to fifteen spans of 90′. The bridge was at first constructed only for a metre gauge line but was afterwards rebuilt just upstream with new girders and a road bridge built on the old girders at the original site. This was in 1894. This arrangement remained in existence till a few years ago when the Railway required a double line bridge; the road bridge was regirdered for railway purposes only and the other girders were strengthened. This bridge is now, therefore, only used for Railway traffic, but can be used in case of necessity for Military vehicular traffic.

(iii).—This portion of the main line between Lahore and Karáchi was opened in 1865 and passes out of the Lahore District near Wán Rádha Rám. The section Lahore to Ráewind is double.

CHAPTER II.—G.

Communications.

Railways.

(*iv*) was opened in 1883 and was for some time a comparatively unimportant section, but has now assumed more importance as an alternative mail route to Delhi.

(*v*).—These chord lines were opened in 1907, 1909 and 1910 respectively. The chord line between Amritsar and Kasúr is the property of the Amritsar-Patti-Kasúr Railway Company and the Kasúr-Lodhrán Chord, known as the Sutlej Valley Railway, is the property of the Southern Punjab Railway Company. Both these are worked by the North-Western Railway.

Lahore station is the principal junction of the North-Western Railway system and is one of the biggest stations in India. A scheme is now under construction for the complete remodelling of this yard.

An important new line contemplated is the Ráewind-Sángla-Khusháb, which will link five railways and tap rich Colony lands; two feeder lines are also under contemplation, *viz.*, one from Sháhdara to Nárowál in the Siálkot District and the other from Lahore to Ajnála and Gurdáspur. The surplus produce of the district moves practically in two directions only, the latter of which is of course enormously the more important, *viz.*, to Lahore for local consumption and to Karáchi for export. It is the main Multán and Amritsar lines which serve the rich upland portions of the district that produce the main agricultural staples with a world-currency, such as wheat, cotton and oilseeds.

Roads.

(*b*) All three *tahsíls* are well supplied with roads. The main metalled roads are Sháhdara to Sheikhupura along the Rávi right bank (District Board), Sháhdara to Ferozepore (Grand Trunk, Provincial) and Lahore to Amritsar (Grand Trunk, Provincial). The following short lengths of road, all maintained by the District Board, are also metalled, *viz.*, Lahore to Niázbeg, Kasúr to Khemkaran, Chúnián to Changa Mánga and Pattoke to Halla. The Grand Trunk roads are the only ones maintained from provincial funds; the District Board maintains a length of 36 miles of metalled and 608 miles of unmetalled road at an average total annual cost of Rs. 42,647. Some of the village roads are mere tracks and in the riverain are often heavy with sand. There are good driving roads along the main branches of the canal, but these are closed to ordinary traffic. The Kaisar-i-Hind and Rávi Road Bridges, which carry the Grand Trunk Road across the Sutlej and Rávi Rivers respectively, and the footway across the Balloke level-crossing on the Rávi, have been already referred to.

CHAPTER II.—G.

Communications.

Roads.

The following table shows the principal roads of the district together with the halting places on them and the conveniences for travellers to be found on each:—

Route.	Halting place.	Distance in miles.	REMARKS.
Grand Trunk Road, Lahore to Peshâwar.	Lahore ...	...	
	Shâhdara ...	4	Grand Trunk Road. *Sarái*, encamping-ground, supply depôt, well, Public Works bungalow. District ends.
Grand Trunk Road, Lahore to Ferozepore.	Lahore ...	...	
	Amar Siddhu ...	8	Grand Trunk Road. Encamping-ground, well, canal rest-house.
	Kána Kachha ...	7	Grand Trunk Road. Encamping-ground, supply depôt, well, Public Works Department rest-house.
	Luliáni ...	9	Grand Trunk Road. Encamping-ground, supply depôt, well, Public Works Department rest-house, Railway Station.
	Kasúr ...	9	Grand Trunk Road. Encamping-ground, supply depôt, well, Public Works Department rest-house.
	Ganda Singhwála (on the banks of the Sutlej).	7	Grand Trunk Road. Encamping-ground, supply depôt, well, *sarái*, Canal, Railway and Public Works Department rest-houses, Railway Station. District ends.
Kasúr to Ráiwind ...	Kasúr ...	...	
	Rukhanwála ...	9	Unmetalled. Railway Station, Canal bungalow, encamping-ground, well, supply depôt.
	Ráewind ...	8	Unmetalled. Railway Station, encamping ground, supply depôt, well, *sarái*, with quarters for Europeans, Railway rest-house.
Grand Trunk Road, Lahore to Amritsar.	Lahore ...	...	
	Chhabil or Munánwan	11	Grand Trunk Road. Encamping-ground, *sarái*, supply depôt, well, District Board and Canal rest-houses.
	Wágah ...	5	Grand Trunk Road. Canal rest-house. District ends.

CHAPTER II—G.

Communications.

Roads.

Route.	Halting place.	Distance in miles.	REMARKS.
Lahore to Harike ...	Lahore ...	...	
	Harike ...	51	Metalled for 4 miles (Lahore to Lahore Cantonment), the rest unmetalled, *viâ* Mián Mír and Patti, well, encamping-ground.
Lahore to Multán ...	Lahore ...	...	
	Niázbeg ...	9	Metalled. Encamping-ground, well, supply depôt, Canal rest-house.
	Chung ...	5	Unmetalled. Police rest-house, encamping-ground, supply depôt, well.
	Manga ...	12	Unmetalled. Police rest-house, encamping-ground, supply depôt, well.
	Bhái Pheru ..	11	Unmetalled. Police rest-house, encamping-ground, supply depôt, well.
	Sarái Mughal ...	8	Unmetalled. Civil rest-house, encamping-ground, supply depôt, well.
	Halla ...	8	Unmetalled. Canal rest-house. District ends.
Chúnián to Multán ...	Chúnián ...	...	Civil rest-house, *sarái*, supply depôt, encamping-ground, well.
	Wán Rádha Rám ...	15	Unmetalled. Encamping-ground, *sarái* with quarters for Europeans, supply depôt, well, Railway Station. District ends.
Chúnián to Ferozepore	Chúnián ...	...	
	Rájowál ...	12	Unmetalled. Encamping-ground, supply depôt, well.
	Khudián ...	6	Unmetalled. Canal rest-house, Railway Station.
	Táráganh ...	5	Unmetalled Encamping-ground, supply depôt, well.
	Ganda Singhwála ...	10	Unmetalled. Encamping-ground, supply depôt, well, *sarái*, Canal, Railway and Public Works Department rest-houses, Railway Station. District ends.

CHAPTER II.—G.

Communications.

Roads.

Route.	Halting place.	Distance in miles.	REMARKS.
Chúnián to Chánga Mánga.	Chúnián ...	...	
	Chánga Mánga ...	9	Metalled. Civil rest-house (rooms in *sarái*), Railway Station. Forest and Canal bungalows at Vahn).
Pattoke to Halla ...	Pattoke ...	...	Civil and Canal rest-houses, Railway Station.
	Halla ...	11	Metalled. Canal rest-house.
Kasúr to Patti ...	Kasúr ...	...	
	Khem Karan ...	6	Metalled. Canal rest-house, encamping-ground, Railway Station.
	Valtoha ...	5	Unmetalled. Canal rest-house, Railway Station.
	Patti ...	15	Unmetalled. Canal and Police rest-houses, Railway Station.
Amritsar to Ferozepore	Sur Singh ...	...	Unmetalled. Encamping-ground.
	Hardo Algoh ...	8	Unmetalled. Canal rest-house.
	Khem Karan ...	11	Unmetalled (see also above).
	Ganda Singhwála ...	8	Unmetalled (see also above).
Lahore to Sharakpur	Lahore ...	...	
	Shahdara ...	4	Grand Trunk Road (see also above).
	Burj Atári ...	7	Metalled.
Chúnián to Kanganpur.	Chúnián ...	...	
	Kanganpur ...	16	Unmetalled. Canal and Police rest-houses, Railway Station.
Kanganpur to Ganda Singhwála.	Kanganpur	...	
	Nijábat ...	9	Unmetalled. Canal rest-house.
	Doburji ...	10	Ditto
	Ganda Singhwála ...	13½	Ditto (see also above).

Navigable waterways.

(*c*) Of water traffic there is little or none. The canals are purely irrigational, and on neither the Sutlej nor the Rávi is navigation easy enough to attract cargo-boats. Timber, however, is floated down the latter when it is in flood from Chamba as far as Lahore.

CHAPTER II.—G.

Communications.

Ferries.

The ferries on the Sutlej River are managed from the Ferozepore District. The following is a list of ferries on the Rávi which are controlled by the Lahore District Board: —

No.	Name of Ferry.	Miles from point at which river enters district.	Number of boats maintained at each.	Average number of boatmen stationed at each ferry.
1	Dhána	...	1	2
2	Talwára	5	1	2
3	Maral	7	1	2
4	Lakhodahr	11	1	2
5	Karaul	14	4	8
6	Kishti Rúpa	18	2	4
7	Ráj Ghát	19	3	6
8	Faizpur Saggián	22	6	12
9	Burj Atári	26	1	2
10	Sahad	30	2	4
11	Niázbeg	32	1	2
12	Shahpur ...	36	2	4
13	Chung	40	2	4
14	Mohlánwál	44	1	2
15	Khudpur	47	1	2
16	Rangílpur	51	2	4
17	Faizpur Kalán	54	1	2
18	Báth	57	1	2
19	Manga	61	2	4
20	Hardo Nau Theh	64	1	2
21	Lakhanke	68	2	4
22	Gagga	70	1	2
23	Madar	75	2	4
24	Ásal	82	1	2
25	Nároke	85	1	2
26	Guruke	90	1	2
27	Áujla	94	1	2
28	Alpa	99	1	2

The ferries are given on annual lease. A *dárogha* and three peons comprise the controlling staff.

CHAPTER II.—G.

Communications.

Posts—Postal Service of the district.

(*d*) The Postal Service in the Lahore District is good. Statistics showing the work done by it and the enormous development of business under all heads are given in table 32 of the B Volume. Outside Lahore itself, there are 16 district offices, *viz.*, at Bághbánpura, Balloki, Chánga Mánga, Chúnián, Clarkábad, Jallo, Kasúr, Kasúr Mandi, Khálra, Khudián, Kot Rádha Kishan Railway Station, Patti, Pattoke Railway Station, Ráewind, Sháhdara Mills and Waltoha. These offices, which are called sub-post-offices, transact all classes of postal business. In addition to these there are 98 Branch Post Offices which also transact all classes of postal business but with certain restrictions. Of these 12 are actually in the Gujránwála District, but are still united with Lahore for postal purposes. These offices are under the control of the Superintendent of Post Offices, Lahore Division, and in account with the General Post Office, Lahore. The General Post Office building at Lahore accommodates the General Post Office, the Dead Letter Office and the offices of the Post Master-General, Punjab, and North-West Frontier Circle, the Superintendent, Railway Mail Service, and the Superintendent of Post Offices, Lahore Division. Besides the General Post Office there are 20 sub-offices in the town and cantonment which are under the direct control of the Postmaster, Lahore, who is assisted by a Deputy and an Assistant Postmaster and two Inspectors of Post Offices, to supervise a staff of 450 Sub-Postmasters, clerks, postmen, &c. The chief subordinate offices are those at Lahore Cantonment and Charing Cross In addition to these offices there are 10 Branch Post Offices. The whole town is thus served by the General Post Offices and 30 subordinate offices. The General Post Office and the Lahore Cantonment and Civil Secretriat Post Offices are the only offices which deliver articles to the public.

The increase in the number of Post Offices in the district, under each class, is shown in the following table:—

	RURAL.		TOWN AND CANTONMENTS.			GRAND TOTAL.
	Sub-Post Offices.	Branch Post Offices.	General Post Offices.	Sub-Offices.	Branch Post Offices.	
Now ...	17	86	1	20	10	134
1894 ...	6	55	1	1	5	68

CHAPTER II.—G

Communications.

Local postal arrangements of Lahore and Cantonments.

The General Post Office, which is the chief office of the Province, is located on the Upper Mall opposite the Central Telegraph Office and the Bank of Bengal. It is a handsome structure surmounted by a Clock Tower and four minarets and is of the Indo-Saracenic order of architecture. It was completed in 1904 and occupied by the Post Office in the same year. The handsome letter box surmounted by a clock in the entrance from the porch is that which was used in the principal post office in the area of the Coronation Darbar of 1911 held at Delhi by His Majesty the King-Emperor George V. The General Post Office makes five deliveries of paid unregistered articles, two of registered letters and parcels and one of money orders daily. The foreign mail was, before the European War, generally received on Sundays when a special delivery of that mail was made and two other ordinary deliveries of paid unregistered articles also made. In the Cantonment there are four deliveries daily and one on Sundays and Post Office holidays; at the Civil Secretariat there are three deliveries daily and one on Sundays and Post Office holidays. The town is well-equipped with street letter boxes of which there are 132, the distant boxes being cleared by bicycle *peons*. Bicycle *peons* are also utilised to exchange mails between the General Post Office, Charing Cross, the Lahore Cantonment and Mughalpura Post Offices. Mails are conveyed to and from the Railway Station in mail carts drawn by horses and several of the postmen serving distant beats are conveyed to their beats in these horse-drawn mail carts. Two flags are flown weekly at the General Post Office, a red one to indicate that the foreign mail has been signalled at Bombay and is expected at Lahore and the Royal Mail Standard (a white one) to indicate the day of despatch of the foreign mail from Lahore.

Telegraphs—General.

Lahore is the headquarters of the Lahore Division of Telegraphs (Engineering) which embraces Kashmír and Chitrál, the portions of the North-West Frontier Province from Kohát northwards, the portion of the Punjab north of the North-Western Railway line from Lahore to Multán and sundry telegraph and telephone canal lines south of this line. The technical management of all telegraph offices including wireless offices and the entire control of all the telephone system is vested in the Division. Matters appertaining to traffic are dealt with by the Traffic Branch (Telegraph) of the office of the Postmaster-General, Punjab.

Telegraph service of the district.

The Lahore Head Office works Duplex with Bombay, Delhi, Amritsar, Calcutta, Karáchi, Simla, Agra, Quetta, Ráwalpindi and Pesháwar. Automatic Wheatstone working also has been established with Calcutta, Bombay, Agra, Karáchi, Simla and Ráwalpindi, and Baudot working with Calcutta, Bombay, Agra and Karáchi is also maintained. The head office has been raised to a Superintendent's charge since April 1914. The main building, erected in 1882 and considerably enlarged in 1892, is centrally situated on the Mall, opposite the General Post Office; it affords accommodation for the Superintendent in Charge and the Testing Telegraph Master and for the office of the Superintendent in

CHAPTER II.—H.

Famines.

Telegraph service of the district.

Charge. The staff consists of the Superintendent in Charge, one Deputy Superintendent attached, 11 Telegraph Masters and 18 clerks, 98 Civil and 12 Military Telegraphists. The Sub-Office at Lahore Cantonment is now in charge of a Military Telegraphist, who is assisted by two other Military Telegraphists. There are besides the Lahore Head Office and the Lahore Cantonment Sub-Office, 16 combined Post and Telegraph Offices as shown in the following table :—

Class.	Number.	Place at which situated.
Rural	9	Balloke, Chánga Mánga, Chúnián, Kasúr Mandi, Kot Rádha Kishan Railway Station, Patti, Pattoke Railway Station, Ráewind, Sháhdara Mills.
Town	7	Anárkali, Charing Cross, Civil Secretariat, Dabbi Bazar, Sadr Bazar, Naulakha, Mughalpura.

Telephones.

The telephone system, which is now a central battery system in the case of the Central Exchange, embraces four exchanges, *viz.*, the Central, the Railway, the Carriage and Wagon and the Cantonment Exchange. As soon as the public come forward in sufficient numbers, it is anticipated that the system will be connected with Amritsar. The total number of connections to the Lahore system is at present 335 excluding 7 Trunk connections.

Section H.—Famines.

Before the Punjab came under British rule it experienced a number of famines which owing to their intensity and devastating effect are still remembered by the people. Many of these raged within the Lahore District, or at any rate were felt within the district. In 1759 there was a disastrous famine known by the name of *Soláh*. For two years previously there had been no rain and the effects of the drought were aggravated by the invasion of Ahmad Shah Abdáli. Most of the people fled and the cattle died. Human beings were forced to live on berries and leaves, and wheaten flour could only be obtained with difficulty at four *sérs* per rupee of two shillings. Relief measures were beyond the Government of the day, and the

CHAPTER II.—H. Famines.

famine raged unchecked till the rains again fell in 1761. Far worse was the famine of 1783 known in the Lahore District as *Chalia* or *Dahsera*. No rain had fallen in 1781 or 1782, and the people were living on the granaries, while the Sikhs were ravaging the country and the price of wheaten flour rose to 2½ *sérs* per rupee. The famine was aggravated by an insect which destroyed all herbage, and raged undiminished till 1785. In 1813 another famine, the *Lakiwala* or *Satsera*, ravaged the land, but this time famine relief measures were instituted. Maharaja Ranjit Singh threw open his granaries to the people and the country was not depopulated. Consequently when the rain fell in 1814 and the Sikh ruler made advances to the *zamíndár*, reduced the share of the grain due to Government, and in other ways restored confidence, agriculture was resumed with less difficulty. Again in 1823 there was scarcity and in 1833 another famine, called *Malkánwála*, which was relieved by Ranjít Singh by the same means. Lahore itself suffered little directly from the famines of 1860-61 and 1867-68, except from the drain of grain which was carried away to more distant markets. Poor-houses were indeed opened and famine works were commenced, but the principal persons who flocked to them were refugees from Málwa, Hissar and Hindustán.

In the next few years the price of wheat fell, till in 1877 it was as low as 34 *sérs* per rupee. The Afghán wars of 1879 and 1880 again disturbed the market, and from 1885 onwards the price of wheat rose higher and higher owing to the increasing exportation to England. In 1892 the grain stores were rapidly depleted all over the province, and all but the well-to-do classes had practically given up wheat as a food-staple in favour of *jawár*. A late monsoon in 1892 all but caused a famine, but this was averted by heavy rain in August, and by the close of 1893 grain had fallen to 26 and 27 *sérs* per rupee. Since 1892 the enormous increase in canal irrigation and the corresponding improvements in communication seem to have laid the famine spectre. In 1896-97 and again in 1899-1900 lack of rain led to scarcity, and in 1907-08 the same effect was brought about by exactly opposite causes, but in none of these cases did the scarcity reach such proportions as to be dignified by the name of famine.

CHAPTER III.—ADMINISTRATIVE.

Section A.—Administrative System and Divisions.

The Lahore District is under the administrative control of the Commissioner of the Lahore Division, whose head-quarters are at Lahore. The ordinary head-quarters staff of the district consists of the Deputy Commissioner (who is also Magistrate of the District and Collector), three Assistant Commissioners, and nine Extra Assistant Commissioners, two of whom are Revenue Assistants, and another is the Treasury Officer. The other Assistants perform criminal, revenue and miscellaneous executive work under the control of the Deputy Commissioner, and also whatever civil judicial work may be made over to them by the District Judge. To the Kasúr Sub-division, which includes the two *tahsíls* of Chúnián and Kasúr with Kasúr as head-quarters, are posted from the staff above noted an Assistant Commissioner if one can be spared, or, if not, an Extra Assistant Commissioner as Sub-Divisional Officer, along with an Extra Assistant Commissioner as Revenue Assistant for the Sub-division. Each *tahsíl* is in subordinate charge of a *Tahsildar*, who ordinarily exercises the criminal powers of a 2nd class magistrate and, on the revenue side, the powers of a 2nd grade Assistant Collector. Under each *Tahsildar* is a *Naib Tahsildar*, with criminal powers of the 3rd class only and revenue powers as an Assistant Collector, 2nd grade; there is also a special *Naib Tahsildar* for the Chúnián Colony. Under a scheme proposed for sanction in the recent Settlement the strength of the Village Record Staff under the District *Kanungo* will be as follows :—

—	Office *Kanungos*.	Field *Kanungos*.	*Patwaris* and *Naib Patwaris*.
Head-quarters	1	0	0
Lahore *tahsíl*	1	5	87
Kasúr *tahsíl*	1	4	91
Chúnián *tahsíl*	1	6	107

Zaildars.

The *zaildári* system was introduced at the Settlement of 1868 and was reorganised at the Settlement of 1892, but *zails* and police stations were not made co-terminous and a great deal of administrative inconvenience was the result. Under a scheme lately sanctioned, which will take effect from the year 1915-16, estates have been so re-arranged throughout the district that no *zail* (with a very minor exception in the case of certain villages of the Lahore urban area) falls within more than one police

CHAPTER III.—A.

Administrative Divisions.

Zaildars.

station. Two *zails* have been added in the Chúnián *tahsíl* where development has been very rapid in the last twenty years; in Kasúr and Lahore there has been no change in the total number. At last Settlement *Zaildars* were paid at 1 per cent. of the revenue of their *zails* subject to a minimum of Rs. 150: this system has now been changed to one under which the district has been treated as a whole for purposes of pay. An attempt will be made to ensure that while the principles that good work and seniority are to be considered in the matter of promotion, the number of *Zaildars* in each *tahsíl* paid at 1st grade rates shall so far as possible be as in column 7 of the table below. The number of posts in each grade has been worked out for each *tahsíl* on practical considerations of the amount of work involved in each *zail*:—

Tahsil	Grade	Last Settlement. Pay.	Last Settlement. No. of *Zaildars*.	Last Settlement. Total.	Now. Pay.	Now. No. of *Zaildars*.	Now. Total.	Remarks.
1	2	3	4	5	6	7	8	9
		Rs.		Rs.	Rs.		Rs	
Kasur ...	I	240	3	720	400	4	1,600	Total ... { I grade ... 11; II grade ... 22; III grade ... 11 — 44
	II	210	6	1,260	325	6	1,950	
	III	175	4	700	250	3	750	
				2,680			4,300	
Chunian ...	I	240	1	240	400	3	1,200	
	II	210	2	420	325	10	3,250	
	III	175	7	1,225	250	4	1,000	
	IV	150	5	750	...	...	...	
				2,635			5,450	
Lahore ...	I	240	5	1,200	400	4	1,600	
	II	210	2	420	325	6	1,950	
	III	175	7	1 225	250	4	1,000	
				2 845			4,550	
Total ...	...	...	42	8,160	...	44	14,300	

CHAPTER III—A.

Administrative Divisions.

Zaildars.

The following table gives a full list of *zails*, amount of revenue from each, present incumbents of the post of *Zaildar* and the prevailing caste or *gôt* in the *zail*—

Name of *tahsil*.	Name of *zail*.	Number of estates.	Annual revenue.	Present *Zaildar*.	Prevailing tribe or *gôt*
			Rs.		
LAHORE.	1. Lakhodahar ...	44	18,798	Dil Muhammad ...	6 Jat, 13 Rajput, 5 Arain and 4 Awan villages.
	2. Bhasin ...	35	28,842	Bashambar Das ..	20 Jat, 5 Rajput and 4 Brahman villages.
	3. Bhadána ...	26	29,735	Sant Singh ...	24 Jat villages.
	4. Her ...	49	39,705	Gopal Singh ...	28 Jat (16 Sandhu) and 10 Rajput villages.
	5. Jawan ...	15	39,500	Kharak Singh ...	13 Jat villages.
	6. Kahna Nau ...	30	49,275	Attar Singh ...	22 Jat villages, 14 of which are Sandhu.
	7. Kachha ..	26	25,155	Moti Shah ...	18 Jat and 5 Rajput villages.
	8. Ráiwind ..	36	47,280	Ujagar Singh ...	22 Jat villages (9 Sandhu).
	9. Manga ...	25	40,962	Chuhar Singh ...	16 Jat villages (11 Sandhu).
	10. Niázbeg ...	34	29,552	Jhanda Khan ...	5 Jat and 9 Rajput villages.
	11. Ichhra ...	27	29,990	Din Muhammad ... Ahmad Din ...	5 Jat, 4 Rajput and 11 Arain villages.
	12. Lahore ...	9	15,945	Khuda Bakhsh ..	8 Arain villages.
	13. Bághbanpura	26	43,073	Muhammad Iftakhar-ud-din.	15 Arain villages.
	14. Shahdara ...	38	17,842	Muhammad Din ...	15 Arain villages.
KASUR.	1. Sur Singh ...	31	36,052	Khushal Singh ...	30 H. Jat villages (3 Dhillon).
	2. Rajoke ...	23	34,528	Wadhawa Singh ...	20 H. Jat villages (5 Sandhu).
	3. Patti ...	32	20,323	Jawand Singh ...	30 H. Jat villages (1 Boperai).
	4. Sabrai ...	43	22,395	Natha Singh ...	34 H. Jat villages (25 Gil).
	5. Algon ..	26	28,451	Vacant ...	22 H. Jat villages (8 Bhullar).
	6. Waltoha ...	22	32,890	Vacant ...	17 H. Jat villages (11 Sandhu).
	7. Sahjra ...	35	22,716	Ghulam Nabi Shah ...	10 Arain and 9 Dogar villages.

CHAPTER III.—A.

Administrative Divisions.

Zaildars.

Name of *tahsil.*	Name of *zail.*	Number of estates.	Annual revenue.	Present *Zaildar.*	Prevailing tribe or *gót.*
			Rs.		
KASUR—concluded.	8. Burj Kalán ...	44	23,480	Hakam Ali ..	23 Arain and 11 Pathan villages.
	9. Kasur ...	25	1,090	Sardar Ali ..	Villages very mixed.
	10. Jaura ...	27	20,332	Muhammad Bakhsh ...	7 Arain and 4 Rajput villages.
	11. Hardo Sahari ...	13	21,157	Kakka Singh ...	8 H. Jat villages (1 Dhillon).
	12. Luliáni ...	16	26,731	Asa Singh ...	12 H. Jat villages (9 Bhullar).
	13. Rája Jang ..	19	26,412	Bahal Singh ..	8 H. Jat villages (3 Sandhu).
CHUNIAN.	1. Bhochoke Par ...	28	...	Arjan Singh ..	25 Jat villages (18 Sandhu).
	2. Mianke Maur ...	19	12,627	Jit Singh ...	19 Jat villages (12 Sandhu).
	3. Bughiána Kalán ...	30	31,938	Abdul Aziz ..	17 Jat villages, one mostly Rajput.
	4 Hanjra ...	23	23,217	Ata Ullah ..	8 Jat, 2 Rajput and 14 Colony villages.
	5. Wariámwála	24	32,184	Shadi Khan ..	19 Colony, 3 Jat villages.
	6. Pattoke ...	2[illegible]	18,984	Gurdit Singh ..	8 Jat and 7 Colony villages.
	7. Chúnián ...	11	21,569	Surein Singh ...	5 Jat villages (1 Gil).
	8. Dev Siál ..	31	20,232	Gahna ...	6 Jat, 9 Rajput and 13 Arain villages.
	9. Bhamba ...	43	32,877	Sundar Singh ...	20 Jat villages (16 Sandhu).
	10. Hallarke Paimar	29	27,486	Dilawar Khan ...	19 Jat, 2 Rajput and 2 Colony villages.
	11. Khudián ...	26	19,464	Lakhpat Rai ...	12 Jat, 4 Rajput, 1 Arain, 1 Khatri and 8 Kamboh villages.
	12. Nijábat ..	54	15,111	Muhammad Ali ...	8 Jat, 8 Arain and 26 Dogar villages.
	13. Kul ...	30	19,172	Kundan Singh ...	19 Jat villages (13 Sandhu).
	14. Kanganpur ..	40	18,349	Kale Khan ..	32 Jat villages (6 Sandhu
	15. Mokal	43	10,517	Arjan Singh ..	16 Jat villages (6 Sandhu).
	16. Balloke ...	36	...	Abdul Aziz	28 Jat villages (9 Sandhu).
	17. Manjoke ...	24	21,089	Bur Singh ...	19 Jat villages (17 Sandhu).

CHAPTER III.—A.

Administrative Divisions.

Chief headmen.

Chief headmen were appointed in all villages at the revised settlement of 1868 and an additional cess of one per cent. on the land revenue was levied for their benefit over and above the five per cent. *pachotra* cess levied for the remuneration of all the headmen of the village. A piece of the common waste, of varying area, was also set apart for the use of the chief headman for the time being. In 1890 it was decided to retain this appointment, the utility of which had been questioned, but all land assignments made under it were resumed and cash *ináms* of equivalent value but not exceeding 1 per cent. of the revenue of the village were granted in their place. At last Settlement a scheme was sanctioned under which the office was to be abolished in all but 78 villages so soon as the existing incumbent should die or be otherwise removed, the one per cent. cess ceasing to be levied and the cash *inám* lapsing to Government. In 1911 fresh rules were issued; the number of *inámdárs* at the time was 51 and the amount of lapsed *ala-lambardári ináms* available for their payment was Rs. 3,941. The rules provided for the gradual increase of *inámdárs* to 76, graded as follows, *viz.*—

			Rs.
35 at Rs. 50 ...	...	...	1,750
41 „ „ 75 ...	...	...	3,075
	Total	...	4,825

After a practical consideration of the work involved in each *zail*, and after allowing one *sufedosh* for each ordinary *zail* and two for those *zails* where the duties of the *inámdár* are specially onerous, it was found at the recent Settlement that so large a number as 76 *sufedoshes* was not at present required in the district. At the same time under the existing system both the existing number was insufficient and the remuneration available had not been fully utilised, as the following figures show, *viz.*—

			Rs.
26 at Rs. 75 ...	...	...	1,950
27 „ „ 50 ...	...	...	1,350
	Total	...	3,300

Sixty was considered a sufficient number, and in order to utilise to the full the existing sum available under lapsed *ináms*, Rs. 449, opportunity was taken to raise the amount of the *ináms* in each grade by Rs. 10. The following is the new pay and

CHAPTER II.—A.

Administrative Divisions.

Chief headmen.

grading :—

			Rs.
24 at Rs. 60 ...	...	...	1,440
36 " " 85 ...	...	...	3,060
	Total	...	4,500

Village headmen.

The number of *lambardars* now and at last Settlement is shown in the table below. Owing to the formation of the Chúnián Colony posts have been increased to the large number of 239. Only 15 have been reduced :—

	Number of estates.	Number of *lambardars*. At last Settlement.	Number of *lambardars*. Now.	Number of posts. Increased.	Number of posts. Reduced.	Total demand. Land revenue (final.)	Total demand. Rates.	Total demand. Total.	Total average demand per *lambardar*.
	1	2	3	4	5	6	7	8	9
						Rs.	Rs.	Rs.	Rs.
Kasúr ...	356	866	869	4	1	4,91,614	7,61,064	12,52,678	1,442
Chúnián ...	498	721	944	232	9	5,32,806	4,72,576	10,05,382	1,065
Lahore ...	400	818	816	3	5	4,86,374	5,91,238	10,77,612	1,321
Total District ...	1,254	2,405	2,629	239	15	15,10,794	18,24,878	33,35,672	1,269

If the total demand for the district inclusive of canal dues be divided by the total number of *lambardars*, the average land revenue for which each *lambardar* is responsible amounts to nearly Rs. 1,300. Registers have been prepared for each *tahsíl*, as required by paragraph 577, Settlement Manual, in which have been recorded the Settlement Officer's recommendations in the case of each estate as to the possibility of reduction of posts when opportunity may arise; but the present value of a *lambardári* as shown by the above high figures points in the direction of increase rather than reduction in the number of posts.

Court of Wards.

There are at present only three petty estates under the management of the Court of Wards. The wealthy estate of Sheikhupura was released from superintendence in the year 1915.

Section B.—Civil and Criminal Justice.

Civil.

The District and Sessions Judge is the chief Civil Court in the district. Under him are four Sub-Judges at head-quarters, all of whom exercise full powers. One Extra Assistant Commissioner at Lahore exercises the powers of a Munsif, 2nd Class. The Munsifs at Lahore, Kasúr and Chúnián are empowered to try suits up to a value of one thousand rupees. The Judges of the Small Cause Courts at Lahore and Lahore Cantonments have powers up to Rs. 500 and the Registrar of the former Court up to Rs. 20. There are three Honorary Civil Judges who can try suits up to the value of Rs. 500. The chief varieties of civil suits prevalent in the district are shown in Table No. 35 of Volume B.

Criminal.

The criminal justice of the district is administered, under the District Judge, by the District Magistrate and his assistants. Among these are at the time of writing three Assistants and eleven Extra Assistant Commissioners, all of whom with one exception exercise first class powers. The exception is a 2nd Class Magistrate. One Assistant Commissioner and two of the Extra Assistant Commissioners are usually stationed at Kasúr. The Cantonment Magistrate exercises 1st Class powers. The three *Tahsildars* exercise 2nd Class, and the four *Naib Tahsildars* 3rd Class, powers. There are also some twenty-nine gentlemen exercising honorary magisterial powers either separately or as members of a bench. In the majority of cases their jurisdiction is limited to a single *tahsíl*, but there are three gentlemen, *viz.*, Sardar Jiwan Singh of Padhána, Lala Harnam Das and Sardar Bahadur Risaldar-Major Janmeja Singh, who exercise criminal powers of the 1st Class, one also exercising Civil 1st Class powers throughout the district, and one, *viz.* Khan Sahib Muhammad Sher Baz Khan, who has criminal powers of the 1st Class and Civil of the 2nd in the Kasúr Sub-Division. There are benches of a present strength of 8, 8 and 6, respectively, two at Lahore and one at Kasúr who exercise 2nd Class powers under Section 15 of the Code of Civil Procedure. Table No. 24 shows the classes of crime prevalent in the district.

Chief Court.

Apart from the actual District Courts Lahore is also the seat of the Chief Court of the Punjab, which at present consists of eight judges, one of whom is the Chief Judge and three are Temporary Additional Judges.

The Bar, etc.

There are 98 Barristers-at-Law practising in the district. There are also 71 1st grade and 23 2nd grade Pleaders, and 29 *Mukhtars* enrolled in the district. Petition-writers total 98, of whom 28 are 1st Class.

CHAPTER III.—C.

Land Revenue.

Registration.

The Deputy Commissioner is *ex-officio* Registrar for the district. In Lahore there is also an additional Registrar and Sub-Registrar with whom the Treasury Officer is associated as joint Sub-Registrar. Each of the other two *tahsíls* has its Sub-Registrar, the *Tahsildars* being joint-Sub-Registrars. The Cantonment Magistrate is also Sub-Registrar for Cantonments. Figures for registration are given in Table No. 37.

Section C.—Land Revenue.

Village communities and tenures.

(*a*) The following is the classification of estates according to tenure as given in the *jamabandís* :—

Class of tenure.	Kasúr.	Chúnián.	Lahore.	Total.
Pattídári	222	151	142	515
Bhaichára	108	245	213	566
Landlord *zamíndári*	5	8	18	31
Communal *zamíndári*	20	39	14	73
	355	443	387	1,185

No classification has yet been made for 53 estates including *rakhs*, Government leased villages and colony villages where proprietary right has not yet been granted. By the system which village communities adopted for the payment of the land revenue recently assessed the grouping is—

Tahsíl.	Landlord *zamíndári.*	Communal *zamíndári.*	*Pattídári.*	Mixed systems including: Excess *chāhi* or *nahri* rate at possession and the balance according to shares.	*Abiána* by shares and the balance by possession.	Permanent area by shares and diallwial at possession.	*Bhaichára.*	Total.	Remarks.
Kasúr	5	20	10	3	25	1	291	355	*Rakhs* and Government estate excluded.
Chúnián	8	39	31	...	220	2	188	488	
Lahore	18	14	3	...	154	...	198	387	
Total	31	73	44	3	399	3	677	1,230	

The ease with which one form of tenure merges in another and the consequent difficulty of exact classification is one of the commonplaces of Settlement literature. Villages of the patriarchal *zamíndári khális* type are mostly of new foundation, having been recently formed by purchase or grant of Government

CHAPTER III—C.
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waste land; here the sole proprietor takes all the profits and pays whole the revenue direct. Communal (*zamíndári mushtaraka*) villages are generally of a type merely transitional between the pure landlord and the divided. The proprietors may be aboriginal owners of the village community (as, sometimes, among the Dogars of the Sutlej Bank), but will be found much more commonly to consist of a few share-holders closely related and but a generation or so removed from new purchasers or grantees of the patriarchal class; here the proprietors collect into one fund the grain or cash rents of such lands as are cultivated by tenants and after deducting the Government revenue and cesses and village expenses divide the profits among themselves according to ancestral shares or in such manner as may obtain according to ancestral usage. *Zamíndári* tenures of either kind early tend to change to *pattídári* (divided by shares) as the number of owners increases, while *pattídári* villages, as times goes on, tend to change into *bhaiachára* (accidental, regulated by possession) as the lands held by each sharer become more and more unequal in value and extent. In *pattídári* villages the measure of right is ancestral shares (*hissas jaddi*) or ancestral shares modified by incidental circumstances, such as purchases, relinquishment by certain shares and so on (*hissas rasmi*). The profits arising from the cultivation of lands held in common by the whole community, from miscellaneous dues and from other sources are very much the same as in the *zamíndári* tenure. The revenue is paid in pure *pattídári* villages according to *hissas jaddi* or *hissas rasmi* as the case may be, but generally the shares are calculated according to numerical fractions. In *bhaiachára* villages possession is the measure of right. The profits are divided in rateable proportions on the extent of the holdings, the revenue assessed being the standard of comparison. Many of the *bhaiachára* and some of the *pattidári* villages are divided into large sub-divisions called *tarafs*. These may or may not be divided off entirely. It is by no means essential that the lands of each *taraf* should lie in one compact block. In many villages the fields of the different *tarafs* are thoroughly intermixed (*khetbat*). In some the division into *tarafs* has not been extended to the common waste. In some of the villages classed as *bhaiachára* the revenue in one *taraf* will be paid on ancestral shares as in the *pattídári* tenure, in another on holdings (*hasl rasad khewat*). In such cases it will usually be found that the *tarafs* are owned by separate tribes. The *tarafs* to be found in many of the *bhaiachára* villages are usually merely relics of the time when they were held on *pattídári* tenure. In the great majority of cases *tarafs* are divided into a number of *pattis*. Each *patti* is usually named after an ancestor of the

present occupants. In *pattídári* villages *tarafs* are named in the same way, but in *bhaiachára* villages they are generally named after tribes or *gôts*.

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The tendency to elect for distribution of the revenue according to the area of assessed land in each share-holder's possession becomes increasingly strong at each re-settlement, and this method is certainly the fairest. On the other hand it is not advisable to weaken the theory of joint responsibility according to ancestral shares where the people are willing to maintain it, and the rule recently observed was to maintain the system hitherto followed unless a clear majority could be shown in favour of a change.

Village organisation.

The powers of the *panchâyat*, or informal assembly of all adult males of the proprietary body, have waned before the importance with which our administration has invested the individual *lambardar* and by the action of our courts. Persons and classes previously dependent on the village community or jealously excluded from its freedom, like artisans and menials or newcomers strange to the brotherhood, have acquired an independence unheard of in earlier days and have been admitted to rights particularly where they have become burdens. The usual bonds or signs of communal life are still existent but are growing weaker, and village society is becoming on the whole rather more democratic. One or more headmen are appointed in each village, their rights and duties being governed by the Land Revenue Act, but, unless the hereditary principle has produced a natural leader, the *lambardar's* influence is usually not great; the post is however often one which, on account of the value of the Government remuneration and other incomings, is eagerly sought after. *Chaukidars* with *Chaukidar* Inspectors (*Daffadar*) are appointed and paid under the *Chaukidars'* Act XX of 1856; there are over 400 in each *tahsil* and their total remuneration amounts to over Rs. 55,000.

Village dues.

Village dues include village cesses of two kinds, *viz.* (*a*) the *Malba* cess, imposed by the landowners on themselves in order to meet common village expenses, (*b*) the cesses, which are in origin seignioral dues, paid to the landowners by other residents in a village. The *Malba* is the fund into which the common income of the village community from all sources is paid and out of which its common expenses are met, such as the cost of repair of survey marks, the fees due on account of warrants issued for the payment of arrears, the entertainment of passing strangers who put up in a village rest-house, &c. The amount is usually 5 per cent. on the land revenue. The accounts are usually kept by a village shopkeeper and the expenditure managed by the

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Village dues.

headmen. Dues of class (*b*) include the following :—*viz.* (1) *Dharat*, a commission on all sales, (2) *Thána Patti*, a tax on marriages varying from Re. 1 to Rs. 5 for each marriage; (3) *Ahtráfi*, a charge on village shopkeepers varying from 4 annas to one rupee a shop; (4) *Charái*, a grazing tax paid by non-proprietors on all cattle grazed on the common land. This is rarely demanded. *Dharat* is much the most important of these dues, and the realisations from it are sometimes large enough to obviate the necessity for the levy of *Malba*. It consists of fees paid, sometimes by the seller, sometimes by the buyer. to the village weighman (*dharwai*) on sales of produce, and the rates usually vary according to the class of staple sold. Usually the contract for weighing the village produce is sold by auction, the expenditure being set off against the contract money, any excess on the debit side being thrown into next year's account against next year's contract money either or more commonly recovered from the *Malba*. The accounts are kept by the weighman.

Land Revenue under Native Rule.

The Mughals' Territorial Divisions.

(*b*) [*Sources.*—Áín-i-Akbari (Jarrett) and Revenue Resources of the Mughal Empire (Thomas).]

The whole Bári Doáb, including the present districts of Gurdáspur, Amritsar, Lahore and parts of Montgomery and Multán, and consisting of 52 *maháls* with an estimated land revenue in 1707 of Rs. 2,06,53,000 round, formed one of the 8 *Sarkárs* of the *Súbah*, or province, of Lahore which fell within the third or the "temperate" zone of the Mughal Empire. The total area of the Bári Doáb *Sarkár* was 45,80,000 *bighas* or 3,578 square miles, and its annual revenue was 14,28,08,183 *dáms*, or Rs. 3,570,204, out of which 39,23,922 *dáms*, or Rs. 98,098, were assigned. The *maháls* or *parganas* which can with any certainty be identified as belonging in whole or part to this district, with their revenue, were as follows :—

Maháls or *parganas.*	Total area in square miles.	LAND REVENUE — *Dams.* / RUPEES. Total.	LAND REVENUE — *Dams.* / RUPEES. Assigned.
Anchharah (Ichhra)	3,367 (Anchharah and Lahore city)	5,00,000 / 12,500	...
Lahore city		29,12,600 / 72,815	...
Lahore suburbs	9	6,74,053 / 16,851	2,02,300 / 5,057
Kasúr	202	39,15,506 / 97,887	23,124 / 578
Total	3,578	80,02,159 / 2,00,053	2,25,124 / 5,635

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The limits of the fiscal administration and even the details of the areas included in the 4 *mahâls* are quite unknown and the notice of the *Súbah* of Lahore in the *Áín-i-Akbari* is more meagre than that of almost any province.

Revenue system.

The indigenous land revenue system as matured by the Emperor Sher Shah appears to have recognised nothing but payment in kind. Tentative reforms were introduced by Akbar under his Ministers and completed by Raja Todar Mal. By the 15th year of his reign Akbar came to the conclusion that the previous one-fourth standard of assessment was over-lenient and as the result of an enquiry extending over ten years, a ten years' settlement was made at one-third of the gross produce based advisedly on the best crops of each year and the years of most abundant harvest. The option of four methods of realisation of the State share of the produce was permitted, *viz.* (1) *Khet Batái*, or the division of the field at harvest time; (2) *Kankút*, or an appraisement of the produce of the standing crops; (3) *Láng Batái*, or rough division of the cut but unthreshed produce; and (4) *Batái*, a more precise division of the garnered produce. Cash payments at rates fixed after careful enquiry were required in the case of sugarcane and other expensive crops which imply the possession of means by the cultivator.

Land was divided into four main classes as follows for each of which appropriate rates of outturn for either harvest were fixed, *viz.*—

Polaj, or land cultivated year after year for each crop in succession without fallows.

Parauti.—Land left temporarily fallow to recover from damage.

Cháchar.—Land allowed to be fallow for 3 or 4 years.

Banjar.—Land left out of cultivation for 5 years or more.

Parauti and *polaj* land paid the normal one-third share of the produce to the State. In the case of *Cháchar* this rate was not worked up to till the fifth year, lower proportions on a progressive scale being taken in the earlier years of the recovery of the land from damage. *Banjar* land was also assessed on a system which took account of the need for land to recover after damage, and this was done by means of a carefully graduated progressive scale of outturn for each year from the first and worst to the fifth and best. A scale of commutation prices was fixed.

The Sikhs' Territorial Divisions.

The following notes are the result of recent special researches made in the original Persian records of the Secretariat. Lahore was divided into *Parganas*, *Talukas* and *Zillas*. There was a metropolitan *Pargana* of Lahore (*Dar-us-Sultanat*). The *Talukas*, so far as can be ascertained, which were included in it in 1814 A.D. were (*i*) the Metropolitan, (*ii*) Chúnián, (*iii*) Sharaq-

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The Sikhs' Territorial Divisions.

pur and (*iv*) Sheikhúpura, the metropolitan *Taluka* being further subdivided as follows, *viz* :—

Name of *zilla*.	Sháhdara.	Niáz Beg.	Bághbánpura.	Lahore Suburbs.	Total.
Number of estates	42	23	9	4	78

By 1844 the extent of the metropolitan *pargana* had been much increased as will appear from the following statements :—

Serial No.	Name of *Taluka*.	Name of *Kárdár*.	Cost of collection.	Total revenue. Rs. A. P.
1	Haveli	Lála Mehtab Rái, Rs. 60 per mensem.	Rs. 3,784 ... *Jágír* Rs. 1,716.	44,000 0 0
2	Maral and Burj Attári	...	...	21,751 0 0
3	Sharaqpur ...	Lála Rám Chand, Rs. 400 per mensem.	Rs. 1,000 ... *Jágír* Rs. 6,650.	19,000 0 0
4	Shekhúpura ...	Lála Rádha Kishan, Rs. 1,000 per annum.	Rs. 2,600.	1,64,140 0 0
5	Patti, 22 villages ...	S. Lehna Singh ...	Rs. 356 ... *Jágír* Rs. 1,570.	7,570 0 0
6	Sarháli, 16 villages...	Fateh Singh, Rs. 20 per mensem.	Rs. 530-9-0 ...	13,305 9 0
7	Khem Karan, 11 villages.	S. Lehna Singh ...	Rs. 675	24,000 0 0
8	Kála Katan, 8 villages.	...	*Jágír* Rs. 420 ...	11,483 0 0
9	Chitrang ...	...	*Jágír* Rs. 550 ...	15,000 0 0
10	Khudpur and Manga	...	...	76,000 0 0
11	Nawanshahr, 22 villages.	Sardár Híra Singh ...	Rs. 1,000 ...	35,248 0 0
12	Fatehgarh ...	...	*Jágír* Rs. 3,000 ...	4,225 0 0
13	Bhasin	Rs. 600 per annum ...	*Jágír* Rs. 23,415 ...	51,071 0 0
14	Suburban villages (Garhi Sháhu, &c., 51 villages).	...	*Jágír* Rs. [illegible],718 ...	52,256 0 0
	Total ...	...	Rs. 55,584-9-0 ...	5,39,049 9 0

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The land revenue of *Pargana* Lahore in 1814 and 1817 respectively was Rs. 1,50,000 round and Rs. 1,76,509.

State-owned lands.

Land was divided for the purposes of fiscal administration into *Khálsá*, or State-owned, and *Jágír*, or Assigned. The land reserved for the benefit of the State was partly farmed out to lessees, who paid down a lump sum of money and in return were invested with the power to collect the Government share of the revenue, and partly, especially in the latter part of Ranjít Singh's reign, managed through paid revenue agents, or *Kárdárs*. The following were some of the best known lessees along with the tract of country and the amount of lease money for which they were responsible :—

Name of lessee.	Tract of country.	Amount of lease per annum.
		Rs.
Faqir Azíz-ud-dín ...	Chúnián and Mozang ...	20,000
Sirdár Hakma Singh ...	*Dar-us-Sultanat* ...	40,000
	Lahore and Sharaqpur ...	15,000
	Total ...	55,000

These lessees, or farmers, were answerable to the Court for their conduct, and the duty of extending cultivation and the peace and prosperity of the country was enjoined upon them in their deeds of grant. The *Kárdár* was both a fiscal and a judicial officer. He was allowed, subject to the observance of certain general principles laid down for him in a Code of Instructions (*Dastúr-ul-Amal*), to fix the assessment of his *taluka*. He might be a *Jágírdár* also, but ordinarily he was an official receiving a personal salary, the amount of which, as will appear from the figures of 1844 above, varied enormously and doubtless formed but a small portion of his takings from his charge.

Jágír lands.

Jágírs were of two kinds, *viz.*, *Dharamarth*, or charitable asignments, and *Dakhlan Kharchan*, or service grants. Lands subject to *Dharamarth* grants were assessed and managed by the State. Those subject to service grants were assessed by the State, but the right of collecting the full Government demand was given to powerful feudatories, like S. Shám Singh Attáríwála ; General Guláb Singh Pohuwindia ; S. Attar Singh Kaliánwála and Sheikh Karím Bakhsh.

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The details of the Sikh revenue system were taken from that of the Mughals. There were three common systems of collection, *viz.*, *Jinsi* (kind) including *Kankút* and *Batái*; *Zabti* and *Qarári* (a system by which lump sums in cash were fixed for particular wells). In the case of collections in kind the State share of the produce was usually sold in the village at current *bázár* prices. The revenue records consisted of the *Khasra*, a register showing cultivated area and outturn in the case of *Batai* and crop, and failed area, in the case of *Zabti* collections. The *Jamabandi*, a record showing the method of collection along with the total yield in Government shares, and certain abstracts or returns giving realizations, balances and cost of collection and incidental expenses. There were in addition to the land revenue proper (*Mal*), cesses (*Abwab*) including *Dharat* or weighment fees, *Farroi*, or miscellaneous fines, etc., and all sorts of extra taxes levied by the revenue agents on various pretexts. The practical result seems to have been that the people paid a fluctuacting cash revenue calculated on about one-fourth to one-half (on land with good natural advantages) of the annual produce valued at moderate prices.

Settlement under British rule—The Summary and First Regular Settlements.

(*c*) Immediately after the annexation in 1849 a Summary Settlement was effected by Captain Tytler. The demand, which was based on a rough valuation of the kind rents taken by the Sikhs, subject to a deduction of 10 per cent., was severely felt especially in the Sutlej Riverain where villages which had lost land by river action had not obtained any reduction of their revenue. Payment in cash was an unpleasant novelty; prices had rapidly fallen after the introduction of British rule and in 1851 the harvest failed. After three years however the Regular Settlement was commenced, Mr. Morris being in charge of the trans-Ravi and Mr. (afterwards Sir Robert) Egerton of the cis-Ravi portion of the district. Certain minor adjustments were made at this time in *tahsíl* boundaries which have since been altered only by the transfer of the Sharaqpur *tahsíl* in 1910 to the Gujránwála District. Settlement operations lasted four years; large *ad interim* reductions were at once granted to distressed villages, and the final demand of 1856 for the whole district showed a reduction of 10 per cent. on the Summary Assessments. The incidence was considerably higher in the trans-Ravi than in the cis-Ravi tract. In the former, owing to the presence of sweet wells and floods from the Deg stream, the new demand was pitched at about Re. 1-7-0 per cultivated acre; in the latter tract which was then dependent on dry cultivation or irrigation from notoriously brackish wells, it fell at under eight annas for high Manjha land and at Re. 1 or more in the riverain. The term of

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the First Regular Settlement was ten years. Reductions had immediately to be allowed in 12 of the trans-Ravi estates and severe drought occurred both in 1861 and 1869; by 1864 however the assessment was found to have workea well on the whole, particularly in the cis-Ravi portion.

The Second Regular Settlement.

The revision of the Regular Settlement was commenced by Mr. Leslie Saunders in 1864 and completed in 1868 under the supervision of Mr. Prinsep, Settlement Commissioner. The principle followed in assessing was that Government was entitled to one-sixth of the gross produce. The previous assessment circles were retained almost intact; "dry" circle rates, varying from Re. 1-8-0 per acre for valuable land near Lahore to five annas in the south-west of the district, were framed, but these were based rather on former rates and the assessing officers' ideas of the proportionate fertility of the land in each circle than on produce estimates. Circle *abiána* rates varying from Rs. 20 to Rs. 6 per well were devised; and canal irrigation, which had started in 1860 from the Upper Bari Doab Canal, was assessed by fluctuating rates also.. A detailed account of Mr. Saunders' methods and of the extent of Mr. Prinsep's supervision is given in paragraphs 30 to 32 of the last Final Settlement Report. A portion of Mr. Saunders' demand was deferred for five to ten years in estates where an extension of cultivation was expected. It was the intention of Government that the new demand, which the Financial Commissioner criticised as very moderate, should be in force for 10 years only; it was however found later that Government was committed to a term of 20 years and this was eventually sanctioned. The figures for the Settlements of 1856 and 1868 are:—

Detail.	Initial assessment.	Deferred.	Total.	Cultivated area.	Incidence.
	Rs.	Rs.	Rs.	Acres.	Rs. A. P.
Regular Settlement of 1856.	5,45,917	...	5,45,917	746,467	0 11 8
Revised Settlement of 1868.	6,78,755	46,942	7,25,697	942,374	0 11 6
Per cent. of increase	24	...	33	26	...

The main defect of Mr. Saunders' assessments was to perpetuate the inequality of the distribution as it existed at the expiry of the previous settlement; and the result was that in 1888 the Mánjha estates, after enjoying a long period of canal irrigation,

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were reaping profits of which only a very small share went to Government, while many of the lowland villages, especially of the trans-Ravi tract, were found to be distinctly impoverished.

The Third Regular Settlement.

The operations of the settlement which has just expired, of which Mr. (afterwards Sir George) Casson Walker was in charge, lasted from the hot weather of 1888 to the hot weather of 1893. In those five years the whole district, with the exception of 8 estates in the immediate neighbourhood of Lahore, was remeasured on the square system and a new record of rights was prepared for each estate.

The result* of the re-assessment was as follows:—

Tahsíl.	Previous demand.	New demand.	Increase, per cent.
	Rs.	Rs.	
Kasúr	1,92,585	2,98,707	55
Chúnián	1,68,769	2,14,057	27
Lahore	2,21,140	3,07,912	39
Total ...	5,82,794	8,20,676	41

*NOTE.—Figures from statement page 71 of Last Final Settlement Report.

The fluctuating water-advantage rate on the Upper Bári Doáb Canal was abolished from April 1891, and a light fixed *nahri parta* averaging six annas per acre was imposed in addition to the ordinary dry rate. It was intended that the scale of occupiers' rates, which was revised simultaneously with the revision of settlement, should be revised during the term of the new settlement, so as to absorb part of the margin of profit from canal irrigation thus left to the landowners, but later on it was decided to defer revision of the scale until conclusion of the period of settlement. On the irrigation from the Upper Sutlej Canals on the other hand a fluctuating water-advantage rate of 12 annas an acre was imposed in addition to a light dry fixed assessment. The term

of settlement, which was sanctioned for 20 years, expired in the Kasúr *tahsíl* in *Rabi* 1911 and in Chúnián and the greater part of Lahore in *Rabi* 1912.

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Working of the last Settlement.

Mr. Walker's Settlement was characterised by great care in village inspections and in the distribution of the demand. The assessment was a lenient one and has been collected easily on the whole, especially in *tahsíl* Chúnián ; the only tracts in which difficulty was experienced were the Kasúr-Hithar, the Chúnián Dabh and Rávi and the Lahore Bet-Rávi and Khádir, especially the last named circle. 1896-97 and 1899-1900 were years of unfavourable rainfall in all *tahsíls* and liberal remissions of sums suspended mainly in these years were granted as an act of grace in connection with the Coronation of King Edward VII.

Fourth Regular Settlement.

The Fourth Regular Settlement, which was conducted by Mr. R. C. Bolster, began in October 1912, and was completed in May 1916. Full information as to the new revenue demand and the general considerations upon which the new assessment is based is given in the assessment reports of the three *tahsíls* and the final settlement report of the district, from which the following pages supply extracts.

The chief justifications for re-assessment were a general rise in prices amounting on the average of the three *tahsíls* to 41 per cent., an increase of cultivation in the Chúnián *tahsíl* amounting to 31 per cent., an extension of canal irrigated area reaching 108 per cent. for the district as a whole, the development of urban lands in the neighbourhood of Lahore, and the very low pitch of the old demand both on agricultural land in the upland circles and (in Lahore and certain outlying private markets) on land which had been converted to building purposes.

Assessment circles.

The old assessment circles of the third regular settlement were retained unaltered save for the amalgamation of the Rávi Pár and Rávi Wár Circles of *tahsíl* Chúnián. After the assessment had been made the Hithár and Dabh Circles of Chúnián were combined into a single Hithár Circle, and the Hithár-Uthár Circles of both Chúnián and Lahore were renamed Bet Bangar. A great deal of regrouping of villages has also been effected in Lahore and Chúnián even where the names of the circles remain unaltered.

Rates of the new Settlement—(*i*) Agricultural.

While the bulk of the district remained under fixed assessment, pure fluctuation was adopted in that portion of the Chúnián Rávi riverain which had been affected by the construction of the Balloke barrage and training works, the people being given the option of reverting after ten years to the fixed system.

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(i) Agricultural.

The soil rates sanctioned with the fixed demand were as follows :—

Table of soil rates.

Tahsíl.	Circle.	SOIL RATES.				
		Cháhi	*Cháhi-nahri.*	*Nahri.*	*Sailáb.*	*Báráni.*
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Kasúr ...	Mánjha-Mitha ...	1 10 0	1 12 0	1 11 0	...	0 12 0
	Mánjha-Khára ...	1 5 0	1 6 0	1 5 6	...	0 9 0
	Pet-Bangar ...	1 2 0	1 6 0	1 4 0	0 8 0	0 8 0
	Hithár ...	0 15 0	0 15 0	0 6 0	0 13 0	0 8 0
Chúnián...	Hithár ...	0 14 0	0 14 0	0 4 0	0 12 0	0 7 0
	Dabh ...	0 13 0	0 13 0	0 4 0	0 10 0	0 6 0
	Hithár-Uttár ...	0 14 0	0 14 0	Uttar 1 2 0 Hithár 0 4 0	...	0 6 0
	Mánjha ...	1 0 0	1 4 0	1 4 0	...	0 7 0
	Rávi ...	0 14 6	1 2 0	1 2 0	0 12 0	0 5 6
	Chúnián Colony ...	...	2 0 0	2 0 0	...	0 7 0
Lahore ...	Mánjha-Mitha ...	1 12 0	1 13 0	1 13 0	...	0 14 0
	Mánjha-Khára ...	1 5 0	1 6 0	1 6 0	...	0 9 0
	Bet Rávi — Uttar ...	1 5 0	1 8 0	1 8 0	1 4 0	0 12 0
	Bet Rávi — Hithár	1 12 0				
	Khádir ...	1 9 0	...	1 2 0	1 4 0	0 14 0

The sanctioned fluctuating crop rates are :—

Crop.	*Cháhi* and *cháhi-nahri.*	*Nahri.*	*Sailáb.*	*Báráni.*
	Rs. A. P.	Rs.	Rs.	Rs. A. P.
Rate ...	1 2 0	2 Average	1	0 12 0

(ii) Urban.

In accordance with special orders providing for the adequate taxation of non-agricultural land, rates varying from Rs. 80 to Rs. 10 per acre according to the ascertained renting value of the site were sanctioned by the application of which demands were brought out, falling at the following approved all-round figures per acre, *viz.* —

Class of land.	Rate per acre.
	Rs.
Outlying private markets in Azamabad	38
Outlying private markets in Kot Rái Búta Mal ...	55
Outlying private markets in Patti	65
Lahore urban Lands	15

In the following table are compared the amount and incidence per acre cultivated of the demand of the third and fourth Regular Settlements respectively :—

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Figures of the third and fourth Regular Settlements.

Tahsíl.	Third Regular Settlement. Assessment Circle.	Demand.	Incidence per acre of cultivation.	Fourth Regular Settlement. Assessment Circle.	Demand.	Incidence per acre of cultivation.
1	2	3	4	5	6	7
		Rs.	Rs. A. P.		Rs.	Rs. A. P.
Kasúr ...	Mánjha-Mitha	1,35,685	0 11 10	Mánjha-Mitha ...	2,59,113	1 6 7
	Mánjha-Khára...	47,771	0 9 11	Mánjha-Khára ..	96,050	1 4 0
	Bet-Bangar ...	44,607	0 10 11	Bet-Bangar ...	60,658	0 14 11
	Hithár ...	80,643	1 0 0	Hithár ...	74,924	0 14 10
				Urban ...	889	41 5 11
Chúnián ...	Hithár ...	1,02,792	0 12 10	Hithár ... (Hithár and Dabh)	1,62,569	0 15 2
	Dabh ...	35,721	0 13 3			
	Hithár-Uttar ...	30,767	0 9 0	Bet-Bangar ...	51,431	0 15 1
	Mánjha ...	73,100	0 9 3	Mánjha ...	1,38,115	1 1 5
	Rávi Pár ... } Rávi Wár ...	27,235	0 10 7	Rávi ...	31,484	0 12 4
	Colony ...	39,170	0 8 5	Colony ...	1,48,517	2 0 1
				Urban ...	676	29 5 8
Lahore ...	Lahore ...	38,240	4 0 7	Lahore ...	58,452	6 2 9
	Bet Rávi ..	47,095	1 1 3	Bet Rávi ...	60,037	1 6 0
	Khádir ...	36,310	1 5 0	Khádir ...	34,568	1 5 7
	Mánjha-Mitha ...	89,516	1 2 10	Mánjha-Mitha ...	1,28,742	1 11 1
	Mánjha-Khára ...	1,02,661	0 11 5	Mánjha-Khára...	1,80,575	1 4 0
	Urban ...	6,724	4 2 5	Urban ...	24,165	14 14 10
Total District ...		9,38,037	0 12 9	Total District ...	15,10,965	1 4 7

Progressive assessments.

All increases exceeding 33 but not exceeding cent. per cent. were postponed for five years and all exceeding 66 for five years more. To meet the case of old proprietary estates in Lahore and Chúnián where, owing to large extensions

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Land Revenue.

Progressive assessments.

of cultivated or irrigated area or both, the increase was over cent. per cent.; one-third of the enhancement was taken at one, one-third was deferred for five and the remaining third for ten years. In the case of the Chúnián Colony, where the old demand was a purely nominal one, half the enhancement was taken at once and the rest after five years. The sums deferred in each *tahsíl* are shown below :—

Tahsíl.	First five years.	Second five years.	Total.
	Rs.	Rs.	Rs.
Kasúr	1,24,378	51,660	1,76,038
Chúnián	1,23,286	24,735	1,48,021
Lahore	75,445	36,589	1,12,134
District	3,23,109	1,12,984	4,36,193

Protective leases.

The number of wells in each *tahsíl*, along with the total amount involved in the first year after reassessment, for which protective leases were granted in accordance with paragraph 505 of the Settlement Manual, is shown below :—

Tahsíl.	Number of wells.	Total land revenue remitted in the first year.
		Rs.
Kasúr	355	2,710
Chúnian	709	6,338
Lahore	445	3,673
Total District ...	1,509	12,721

Assessment of canal irrigated lands—

(*i*) Upper Bari Doab Canal.

Under the recent settlement lands irrigated by the Upper Bári Doáb Canal continue to pay a *nahri-parta* which is that part of the fixed assessment which represents the difference between the *bárání* and *nahri* soil rates. *Nahri-parta* is collected along with the rest of the fixed demand, the Irrigation Department taking a book credit for the total sum realised with each harvest.

Nahri-parta.

The following statement shows the new rates and the total

CHAPTER III.—C. Land Revenue. *Nahri-parta*

ultimate amounts credited under Government sanction as *nahri-parta* to the Irrigation Department :—

Tahsíl	Assessment Circle (old arrangement).	Rate of *nahri-parta* per acre.	Total amount of *nahri-parta.*
		Rs. A. P.	Rs.
Kasúr ...	Mánjha Mitha ...	0 15 0	1,13,024
	Mánjha Khára ...	0 12 6	53,349
	Bet Bangar ...	0 12 0	20,859
	Total *Tahsíl* ...	...	1,87,232
Chúnián* ...	Bet Bangar ...	0 12 0	23,605
	Mánjha ...	0 13 0	82,844
	Rávi ...	0 13 0	2,849
	Colony† ...	1 9 0	1,14,717
	Total *Tahsíl* ...	...	2,24,015
Lahore* ...	Mánjha Mitha ...	0 15 0	48,374
	Mánjha Khára ...	0 13 0	90,962
	Bet Rávi ...	0 12 0	12,052
	Khádir ...	0 12 0	110
	Lahore‡ ...	2 0 0	3,148
	Total *Tahsíl* ...	...	1,54,646
	Total District ...	...	5,65,893

The sums realised as *nahri-parta* in each year were—

	Rs.
Kasúr	46,718
Chúnián	57,742
Lahore	61,083
District	1,65,543

The income of the Irrigation Department has increased therefore by over four lakhs of rupees.

*Proposed figures.

†In the Chúnián Colony the period for the arrangements under which the Irrigation Department takes indirect credit for land revenue and *málikána* has not yet expired, and the Colony has, for the sake of uniformity, been treated though it paid *nahri-parta* to the Irrigation Department.

‡In the Lahore Circle where no circle soil rates were sanctioned, an average rate was worked out by the Settlement Officer.

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Land Revenue.

Rules for imposition and remission of *nahri-parta* during settlement.

Detailed instructions regarding the levy of *nahri-parta* on land to which irrigation has been extended and its remission on land from which irrigation has been withdrawn during the currency of settlement have been issued by the Financial Commissioner, and are printed as Appendix III of the Final Settlement Report. They are based on the rules recently introduced for the Sirhind Canal and make alteration of outlets the test of extensions or reductions. Petty changes in the area irrigated are to be disregarded.

Occupiers' rates.

The schedule of Occupiers' Rates in force is that introduced in 1891 (see Chapter II A. (*h*)). On the average of the years selected as the basis of the produce estimate at the recent re-assessment the annual sum realised as occupiers' rates from the various *tahsíls* was as follows :—

	Rs.
Kasúr	7,55,349
Chúnián	6,82,913
Lahore	5,91,293
District	20,29,555

(*ii*) The Upper Sutlej Inundation Canals—Water-advantage rate.

Irrigation from the Upper Sutlej Inundation Canals in the *tahsíls* of Kasúr and Chúnián is assessed at a fluctuating water advantage rate, the whole of which is paid to the Irrigation Department, fixed in the recent settlement at Re. 1 per acre sown subject to remission for failed crops.

Occupiers' rates.

The schedule of occupiers' rates introduced in 1900 (see Chapter II A. (*h*)) is still in force, but is shortly to be revised.

The average annual amounts realised under the above heads in the years selected as the basis of the produce estimate at the re-assessment were as follows :--

Tahsíl.	Water-advantage rate.	Occupiers' rates.	Total.
	Rs.	Rs.	Rs.
Kasúr	3,817	5,715	9,532
Chúnián	27,984	61,144	89,128
District ...	31,801	66,859	98,660

Lands irrigated by the Upper Chenab Canal have been assessed, under a fluctuating system which will be in force for ten years, to *nahri* rates varying from village to village in accordance with their strength or weakness, the average of which is Rs. 2 per acre. The credit to be made annually to the Irrigation Department will be the net amount by which a theoretical dry assessment calculated at sanctioned rates of Rs. 9,661 falls short of the total fluctuating demand.

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Land Revenue.

(iii) The Upper Chenab Canal—*Nahri* crop rates.

Occupiers' rates are levied according to the scale published in 1912 (see page 138).

Occupiers' rates.

The lands irrigated by the Lower Bári Doáb Canal are situated (*a*) in the Rávi Wár Circle, (*b*) in the Mánjha Circle of Chúnián *tahsíl*. Lands of class (*a*) pay a *nahri* rate, under a system of assessment, which is wholly fluctuating, of Rs. 2-4-0 per acre Here the Irrigation Department will receive credit from year to year for a net sum consisting of the difference between the demand actually assessed and a theoretical dry revenue of Rs. 1,312. Class (*b*) lands pay a fluctuating rate of Rs. 2-4-0 per acre in addition to a fixed demand and the whole of this will be credited to the Canal Department. In both cases the assessment is for ten years.

(iv) The Lower Bári Doáb Canal.

Occupiers' rates are charged according to the schedule introduced in 1913 (see page 138).

Occupiers' rates.

The total ultimate land revenue demand for the district is less than 15¼ lakhs of rupees, while the total realisations from canal dues on the two old canals alone (Upper Bari Doab Canal and Upper Sutlej Inundation) exclusive of *nahri-parta* are over 21¼.

Relative amount of canal dues and land revenue demand.

In the following table is shown the percentage by which the old demand has been raised in the new Settlement along with the percentage of the true agricultural half net-assets represented by the new demand :—

Pitch and rate of enhancement of the new demand.

Tahsíl.	Percentage of increase of new on old demand.	Percentage of true agricultural half net-assets represented by new demand.
1	2	3
Kasúr	59	42
Chúnián	73	46
Lahore	54	43
District	62	44

CHAPTER III.—C.

Land Revenue.

Pitch and rate of enhancement of the new demand.

When it is remembered that the Government maximum standard of assessment is the full half net-assets, the great leniency of the new demand is clearly shown by the figures in column 3. For land under buildings in the Lahore *tahsíl* (*i.e.* the urban circle) it was not possible, owing to the inadequacy of the old land revenue, to adopt Urban Standards of assessment, and a new demand was fixed which amounts only to three-sixths of what Government might have taken if the land had remained under the plough. The moderation of the new assessments notwithstanding, the rate of increase has been considerable everywhere, particularly in *tahsíl* Chúnián where the Canal Colony was developed since the previous Settlement.

Term and date of commencement of new settlement.

The new settlement runs from *Rabi* 1914 in Kasúr and from *Kharíf* 1915 in Chúnián and Lahore, except in the urban circles of all three *tahsíls* where the date is *Rabi* 1916. The term of the settlement is 20 years in the agricultural and 10 in the urban circles.

Miscellaneous—Realisation of land revenue.

(*d*) The proportions in which the land revenue will be realised at each harvest in the new settlement are shown below :—

Tahsíl.	Number of villages paying at					Total.
	1/2 *Kharíf.* 1/2 *Rabi.*	1/3 *Kharíf.* 2/3 *Rabi.*	2/5 *Kharíf* 3/5 *Rabi.*	1/4 *Kharíf.* 3/4 *Rabi.*	3/8 *Kharíf* 5/8 *Rabi.*	
Kasúr ...	170	51	128	7	...	356
Chúnián	132	1	364	...	...	497
Lahore	318	37	8	...	36	400
DISTRICT ...	620	89	500	7	36	1,252

The demand is payable in a single instalment at each harvest, *viz.*, *Kharíf* 1st July and *Rabi* 1st February. To facilitate collection the grouped system has been adopted under which the *zails* in each *tahsíl* are grouped under different individual days for payment within a suitable period ending with the above dates.

Cesses.

Cesses amount to Rs. 14-6-0 per cent. of the Land Revenue, as follows :—

	Rs.	A.	P.
Local rate	9	6	0
Lambardari	5	0	0

CHAPTER III.—C. Land Revenue.

The average extent of a holding.

The average cultivated area per owner for the district is 10 acres, the Chúnián holding exceeding and the Kasúr holding falling short of this figure.

The Record of Rights.

The Record of Rights prepared at Settlement, or standing record, contains the following documents, *viz.*—

(1) A preliminary proceeding.

(2) A field map (*shajra kishtwár*).

(3) A genealogical tree of the owners (*shajra nasb*).

(4) A register (*jamabandi*) of the holdings of owners and tenants showing the fields comprised in each and the revenue for which each owner is responsible and the rent payable by each tenant.

(5) A list of revenue assignments.

(6) A statement of rights in wells.

(7) A village administration paper (*wájib-ul-arz*).

(8) The order of the Settlement Officer determining the assessment.

(9) The order of the Settlement Officer distributing the assessment over holdings.

Alluvion and Diluvion rules.

The district has an extensive front on two rivers, and there are at present over 200 villages subject to river action. Rules relating to the imposition, remission and reduction of assessment were sanctioned by the Financial Commissioner in 1915. Briefly they provide for the assessment according to quality of land either not cultivated at Settlement or not producing at Settlement *Munj kana* in considerable areas fit for grazing or sale but subsquently brought under cultivation or found to yield such assessable *Munj kana*. Similarly when land assessed to revenue is carried away or is rendered unfit or deteriorates the assessment is remitted or reduced. The rules also provide for the assessment during Settlement of land the assessment on which has since been remitted. Measurements are made annually. Special rates at a higher pitch than those approved for the rest of the district apply to villages in the near neighbourhood of Lahore.

Secure and insecure areas.

In accordance with the orders of Government for the general organisation of famine preventive measures and to regulate the grant of suspensions and remissions, all the estates of the district have been carefully classified according to their liability to, or immunity from, the results of bad harvests and a scheme for the management of Secure and Insecure Areas duly approved by the Financial Commissioner has been drawn up which is printed as Appendix VII to the Final Settlement Report. There is no whole circle or tract in the district that can be called insecure,

CHAPTER III.—C.

Land Revenue

Secure and insecure areas.

and the distinction between the secure and the insecure is often technical rather than real. Certain villages in each circle where weakness exists have been grouped in two classes A and B, according as they are ordinarily insecure (A), or ordinarily secure but may require suspensions after two or more successive failures of harvest (B). The sum total under both classes is only 129 out of the 1,268 cultivated villages of the district. The riverain tracts are naturally the weakest, being unprotected by permanent canal irrigation and liable to natural calamities such as floods; holdings moreover are small and the people are more or less used to suspensions and remissions. The spring harvest is throughout the district by far the more important and the practice has always been to await its result before proposing suspensions as the result of the foregoing *Kharíf*. Danger rates have been framed which supply, by comparison with the incidence of the revenue instalment per acre of matured crops, an index to the necessity for suspensions.

Assignments of land revenue.

The following statement compares the total value of all assignments at various periods:—

Tahsíl.	By assessment of 1892-93.	Prior to this Settlement.	By new assessment.
1	2	3	4
	Rs.	Rs.	Rs.
Kasúr	15,890	10,843	8,623
Chúnián	14,210	13,646	13,078
Lahore	82,111	69,939	99,117
Total District ...	1,12,211	94,428	1,20,818

The progressive decline in the value of assignments in two *tahsils* is due mainly to resumption for breach of conditions, to the expiry of life-grants and to the discovery of the unauthorised enjoyment by *jagíradárs* in a few cases of *nahri-parta*. The rise in value in the third *tahsíl*, Lahore, was the result of the enhancement in the demand on lands both rural and urban in the near neighbourhood of Lahore, two *jágírs* in particular being heavy gainers, *viz.*, those held by the *Bhái* family and by the municipality of Lahore. Only a very few cases were brought to light in which use could be made of the power to make over to the owners of the village, unassessed, to treat as they might see

CHAPTER III.—D.

Miscellaneous Revenue.

Assignments of land revenue.

fit, after resumption *quâ* grants from Government, petty *Mafis* of a smaller value than Rs. 20 released for life or for the term of Settlement.

In the case of grants for the maintenance of institutions, single managers are wherever possible now entered instead of a number of shareholders, a fact which should reduce the number of disputed succession cases and promote efficiency of management. No new assignments were created at Settlement.

The following is list of the more important assignments, mention of some of which is made in Chapter I-C. (Leading families) :—

Tahsíl.	Name of assignee.	Present value (round) of assignment
		Rs.
Kasúr ...	S. Rashbeg Singh of Todepur ...	2,000
	Maháraja of Kapúrthala ...	1,600
	The Haríhar Shrine	1,100
	S. Waryám Singh of Algon ...	1,100
Chúnián ...	S. Hardiál Singh of Bahrwál ...	2,000
	*S. Fateh Singh and S. Jhanda Singh of Lahore.	5,000
	The Bhái Pheru Shrine	2,400
Lahore ...	The Municipal Committee, Lahore ..	45,700
	Bhái Hardiál Singh and others ...	9,900
	Pandit Kailás Náth	4,000
	Rája Fateh Singh of Shekhupura ...	6,200
	The Maháraja of Kapúrthala ...	4,300
	D. B. Díwán Narendar Náth ...	4,000
	Díwan Kishan Kishore	2,000
	Sodhi Sher Singh	2,100
	The Kamas Shrine	18,000
	The Manak Shrine	2,100
	The Brahon Búta Shrine (Amritsar) ...	1,100
	S. Gulzár Singh	1,200

*NOTE.—Including villages in *tahsíl* Lahore.

Section D.—Miscellaneous Revenue.

The figures for the general collections of revenue are to be found in Table 44, where it will be seen that easily the most important in this district is the "Canals' Direct Revenue." The canals irrigating the district are the Lower Bari Doab Canal, the

CHAPTER III.—D.

Miscellaneous Revenue.

Upper Bari Doab Canal, the Lower Chenab Canal and the Sutlej Inundation Canals. The rates of the dues levied on these canals will be found in Chapter II—H.

Excise.

Figures for Excise revenue, with a list of the liquor shops in the district, are given in Table 41 of Volume B. Lahore has no distillery within its limits, but owing to its large European population imports a large amount of foreign spirit and wines. There were in 1914-15 fourteen licenses for the wholesale vend of imported spirit and wines and fermented malt liquors, a number only equalled by Simla; and the 21 licenses granted for retail sale to hotels, clubs, refreshment rooms and dâk bungalows was only exceeded by Ráwalpindi. There were 16 shops licensed to sell imported spirits and wines and fermented malt liquors by retail, 49 similarly licensed for native spirits, 38 for methylated spirits, 72 for opium and poppy heads, 35 for medical opium, 23 for *charas* and *bhang*, 1 for *bhang* only. 12 persons were licensed to sell cocaine, and out of a total of 15,341 grains of cocaine sold to the public, 7,627 were sold in Lahore.

A special campaign against illicit distillation was commenced in October 1914 in Lahore amongst other districts. Its efficacy is shown by the following statement :—

YEAR.	NUMBER OF PERSONS			Amount of fines imposed.	Amount of rewards distributed.
	Arrested.	Convicted.	Imprisoned.		
1	2	3	4	5	6
				Rs.	Rs.
1910-11 ...	78	64	26	2,630	1,946
1911-12 ...	115	104	23	5,646	1,806
1912-13 ...	62	49	28	3,105	1,296
1913-14 ...	88	77	44	2,270	981
1914-15 ...	95	67	48	1,938	2,692

CHAPTER III.—E — Local and Municipal Government. — Excise.

It will be seen that imprisonment has been substituted for fining as a punishment to a great extent, and the system of rewards encouraged. Moreover *Lambardars* have been dismissed where they have failed to report illicit distillation. The system has also been started with success by which liquor is sold to the customers in sealed bottles. This has been found to diminish rowdyism in the liquor shops.

Stamps.

The revenue collected from judicial and non-judicial stamps is also shown in Table 44. The revenue from stamps is one that is rapidly increasing, and it is interesting to note that, but for a drop in the receipts for 1914-15 due to the dislocating effects of the war, the revenue from non-judicial is increasing faster than that from judicial stamps, a phenomenon which seems to point to the conclusion that commerce is outstripping litigation in Lahore. The number of stamp-vendors has increased from 148 in 1911-12 to 182 in 1914-15. Stamp-vendors were allowed Rs. 9,070 discount in the later year.

Income-tax.

Income-tax is another rapidly growing source of revenue in the Lahore District. Better assessment in the last few years has more than doubled the receipts. The figures show that from 1900-01 to 1906-07 the increase in revenue was only Rs. 34,616, while from 1906-07 to 1914-15 the increase has been Rs. 1,82,464. A special revision was held during the latter year in Lahore which resulted in an increase of the final demand under part IV by Rs. 6,000. Although a fair number of the smaller assessees ceased to be assessed after the inquiry, yet the net result was a substantial increase.

Registration.

Registration revenue is also increasing in Lahore and fuller details of the registration work of the district are to be found in Table 37.

Local rate.

In spite of a slight rise in the last three or four years the local rate on the other hand can on the whole hardly be said to be either increasing or decreasing.

Section E.—Local and Municipal Government.

The working of the various local bodies in the district is shown in Tables 45 and 46 of the Statistical Volume B.

The District Board—Constitution and powers.

The constitution and powers of the Lahore District Board are those of most bodies constituted under Act XX of 1883. The Deputy Commissioner is President. The proportion of

CHAPTER III.—E.

Local and Municipal Government.

Constitution and powers.

members *ex-officio*, nominated and elected, from each *tahsíl* is shown in the following table :—

Tahsíl.	Number of Members.			
	Ex-officio.	Nominated.	Elected.	Total.
Lahore	5	2	7	14
Kasúr	2	...	6	8
Chúnián	1	..	7	8

The *ex--officio* members are at present the Deputy Commissioner (President), Personal Assistant to the Deputy Commissioner (who is also Secretary), the District Inpector of Schools, the Revenue Assistant, the Sub-Divisional Officers, Kasúr, and three *Tahsíldars*. The two nominated members at present are the Hon'ble Rai Bahadur Ram Saran Das and Rai Bahadur Narinjan Das, Public Prosecutor. The tenure of office of all members is limited to three years The elected members each represent a circle. The possession of land paying Rs. 5-3 4 local rate in a circle is the qualification for electorship. Hitherto keen competition has been the exception rather than the rule: in the elections of 1914, there were two disputed contests, 13 members were returned unopposed, and 4 places were filled by nomination because no candidate came forward. Meetings are held at least six times a year, usually at Lahore, but sometimes at *tahsíl* headquarters or at places where cattle fairs are in progress. The attendance is generally good and has improved since the practice of paying travelling allowance to Members was started.

Income and expenditure.

The activities of the Board naturally depend upon its income; this may be roughly divided into local rate (at the rate of Rs. 9-6-0 per cent. on land revenue), grants from Government and various miscellaneous receipts from education, arboriculture, ferries, etc. The total in 1913-14 was roughly two lakhs. The chief heads of expenditure are shown in Table 45 of the Statistical Volume B. "Education" includes the maintenance of an industrial school at Kasúr, 3 middle schools, *viz.*, Bághbánpura, Padhána and Sur Singh, and 99 primary schools (boys and girls), and grants to 18 private schools; the number of schools is rapidly

CHAPTER III.—E.

Local and Municipal Government.

Income and expenditure.

increasing, but is restricted by lack of funds and the difficuty of providing trained teachers. Under the head "Medical" comes the upkeep of dispensaries at Ali Razaabad, Sháhdara, Khálra, Khudián and Pattoke and contributions to three Muncipal dispensaries, *viz.*, Kasúr, Chúnián and Patti, and 5 private and Government dispensaries, *viz*, those at Váhga, Clarkabad and at the Lady Aitchison and Mayo Hospitals, and the maintenance of lunatics, vaccination, plague and other unforeseen charges. Public works account for a large sum annually: there are in the district under the District Board 36 miles of metalled and some 600 miles of unmetalled road. One of the most important of the minor heads of expenditure is the Veterinary; there are Veterinary dispensaries at Kahna Nau, Chúnian and Kasúr and an Itinerating Veterinary Assistant with his head-quarters at Rája Jang; cattle-breeding receives encouragment by the purchase of bulls from Hissar, which are frequently sold to *zamíndárs* at half price; there are also 15 District Board stallions located at Hudiára, Luliáni, Sattoke, Mának, Naulattar, Lahore, Patti, Ráiwind, Káhna Nau, Kasúr and Chúnián; the horse and cattle fairs of the district are at Kahna Nau, Pattoke and Kasúr, and there are several minor fairs. "Civil Works" includes the planting and maintenance of roadside trees; some 200 miles of road are already lined with trees and extensions are being made annually.

Municipalities and Notified Areas.

The Lahore District contains four municipalities, *viz.*, Lahore, Kasúr, Chúnián and Khem Karn and four notified areas (or towns with a population of less than ten thousand inhabitants for which it is inexpedient to constitute regular municipalities), *viz.*, Khudián, Patti, Padhána and Pattoke.

Lahore Municipality.

The Lahore Municipal Committee is of the first class and was constituted by the Punjab Government in 1867.

Boundaries of the Municipal Area.

The boundaries of the municipality were fixed by Punjab Government Notification No. 138, dated th e 21st March 1885, as subsequently amended by Notifications Nos. 713 and 114, dated the 24th September 1888 and 10th February 1913, respectively. The total population of the area within municipal limits as found at the census of 1911 was 210,271.

Constitution.

The municipal committee consists of 30 members, 10 of whom are nominated by Government and the rest elected. The Deputy Commissioner for the time being is the *ex-officio* President of the committee. For election purposes the municipality is divided into four wards.

Administration.

For administrative purposes the City including the Landa Bazar is divided into eight wards, each in charge of two Members,

CHAPTER III.-E.

Local and Municipal Government.

Administration.

one Muhammadan and the other Hindu; Anárkali and the villages included in the municipal area are in charge of three (two Muhammadan and one Hindu) Members; the Civil Station is divided in four wards and is in charge of four European Members.

The work of the committee is carried on by a separate sub-committee for each of the following branches, *viz.*, (1) Finance, (2) Public Works Department, (3) City, (4) Civil Station, (5) Public Health, (6) Education. Business Bye-laws for the conduct of the work of the committee were published in Punjab Government Notification No. 10, dated the 31st January 1913.

Functions.

The chief functions of the municipality are control over construction of buildings, registration of births and deaths, supervision of slaughter-houses, markets and burning and burial grounds, the licensing and controlling of hackney carriages plying for hire, the registration and supervision of dangerous and offensive trades, and encouragement of vaccination operations.

Taxation.

The only taxes levied by the municipal committee are the octroi and wheel taxes. According to the figures of 1913-14, octroi yielded a gross income of Rs. 8,42,050, or about 74% of the income of the municipality. The articles taxed are grouped under nine different classes of the octroi schedule sanctioned by Punjab Government Notification No 326, dated the 30th April 1913. The incidence of the octroi tax in 1913-14 was Rs. 3-6-9 per head of population. Through trade is not taxed in the municipality at all. [*Vide* Appendices C and D.]

Income and expenditure.

The other sources of income are fees from schools and licenses, sale-proceeds of nightsoil and sewage water, rents of municipal land, shops, and *tharas* (platforms erected in front of private houses on municipal land), *tehbázári* and *takht posh* (fees levied on hawkers and vendors for the use of municipal land to supply their goods), fines and Government grants. The total income of the municipality from all sources in the financial year 1913-14 was Rs. 10,88,383. The expenditure during the year ending 31st March 1914 was as follows :—

	Rs.
General administration and collections	91,338
Public safety	97,598
Public health and convenience	6,69,685
Public Instruction	49,258
Contributions	1,108
Miscellaneous	87,240
Total	9,96,137

CHAPTER III.- E.

Local and Municipal Government.

Works of public utility

Lahore has enjoyed a municipal water-supply since 1882. Details in regard to large schemes for the extension of the water supply, sewage disposal, electric lighting and widening of streets are noticed in Section F.—Public Works. Recent improvements made in the Shahálmi, Rang Mahal, Said Mitha and Jaure Mori Bazárs have relieved the congestion of the roads caused by wheeled traffic. Since the appointment of the Health Officer there has been a marked improvement in the sanitation of the town, but a good deal is still required to be done in this direction.

Kasúr Municipality.

Kasúr municipality, which is of the 2nd grade, was established in 1885; its boundaries are fixed by Punjab Government Notification No. 1025 S., dated 18th August of the same year. The total population of the municipal area is 24,783. There are 15 members, 10 of whom are elected and 5 nominated. The Sub-Divisional Officer of Kasúr is President *ex officio*. For administrative purposes the municipality is divided into 10 wards, each in charge of a single member. There are three permanent sub-committees, *viz*., Financial, Public Works and Sanitary, the first two consisting of 5 members each and the third of four. The chief functions of the municipality are the registering of births and deaths, and the control of construction of buildings and cattle-pound arrangements. Octroi is the only tax levied, the income in 1914-15 amounting to Rs. 87,000 round. The other sources of income are realisations from pounds, revenue derived from municipal property, grants and contributions and miscellaneous. The total income of 1914-15 was Rs. 1,11,949, and the total expenditure for the same period Rs. 1,11,518. The chief work of public utility carried out within recent years has been the drainage of the separate portions of the municipal area known as Kots Azam Khan and Fateh Din Khan.

Chúnián Municipality.

Chúnián municipality is of the 2nd Class and was established, like Kasúr, in 1885, its boundaries being fixed under the same notification. The population is 7,151. There are 12 members, 8 elected, 1 nominated, and 3 *ex officio*. The Sub-Divisional Officer of Kasúr is *ex-officio* President. The creation of wards is under contemplation. The sub-committees are identical with those in Kasúr and each consists of four members. Octroi is the only tax levied, and the other sources of income are, broadly, those described in the case of Kasúr. The total income and expenditure for 1914-15 were Rs. 21,000 and Rs. 23,000, respectively. No large work has been carried out in recent years. A water-supply scheme is under consideration.

Khem Karan Municipality.

The municipality, which is of the 2nd class, was constituted in 1868. The population of the municipal area is 5,732. The

CHAPTER III.—E.

Local and Municipal Government.

Khem Karan Municipality.

committee consists of 6 members, 2 nominated (including one of the Kamboh owners), and 4 elected. The *Tahsildar* of Kasúr is *ex-officio* President. There are permanent sub-committees for Finance, Sanitation and Public Works. Octroi is the only tax levied. The total income for 1914-15 was Rs. 13,653 and the total expenditure Rs. 13,506. A drainage scheme is in contemplation.

Khudián Notified Area.

The notified area had the status of a municipality from 1887 to 1913; the Punjab Government notification constituting the notified area was No. 459, dated 21st June 1913. The population of the area is 2,988. There are 5 members, all nominated, of whom 2, *viz.*, the *Tahsildar* of Chúnián and the Sub-Assistant Surgeon of Khudián sit *ex officio*. The committee controls the construction of buildings, and the registration of births and deaths and arranges for the assessment, recovery and expenditure of taxation, and other income. There is a tax, imposed by Punjab Government Notification No. 462, dated 21st June 1913, on professions and trades, which yielded Rs. 1,069 in 1914-15. The total income for the year 1914-15 was Rs. 2,223 and the total expenditure Rs. 2,114 The drainage of the area has been the chief work of recent years.

Patti Notified Area.

Patti was a municipality from 1874 till 1912-13, when it became a notified area. Its boundaries were fixed by notifications dated the 25th September 1912 and 3rd May 1913. The total population of the area is 7,987. The committee consists of 5 members appointed by the Commissioner, the *Tahsildar* of Kasúr being *ex officio* President. The committee exercises under the Municipal Act functions similar to those of other notified areas. The only tax levied is the personal tax, which yielded Rs. 3,960 during 1913-14. Other sources of income are conservancy, school fees and boarding fees, dispensary fees, pounds, slaughter-houses, and Government grants, the total income amounting to Rs. 8,990. The total expenditure was Rs. 8,578, of which, school establishments, dispensaries and conservancy establishment were the most important charges. The construction of drains, the paving of the streets, and improvements to the hospital are contemplated.

Pattoke Notified Area.

Pattoke was created a notified area in 1909, boundaries being fixed under Punjab Government Notification dated 9th July of the same year. The population of the notified area is 1,880. There are five members, all appointed by the Commissioner, and the Colony *Naib Tahsildar* is *ex-officio* President. The Committee exercise all the powers provided by the Municipal Act in connection with the control and sanitation of buildings,

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Public Works.

Pattoke Notified Area.

The house-tax, which is the one only levied, yielded Rs. 1,637 in 1913-14. The figures of total income for the same year were Rs. 7,262, nearly half of which consisted of contributions from Government for general purposes, and of total expenditure Rs. 5,669.

Padhana Notified Area.

The notified area, which was established by Punjab Government Notification No. 215, dated 19th June 1895, has a population of 4,587. There are 6 appointed members; the *Tahsildar* of Lahore is President *ex officio*. The functions of the committee of a notified area have been already described under the paragraph relating to Pattoke. The only tax levied is one on professions the receipts from which amounted in 1914-15 to Rs. 743. The total income for the same year was Rs. 770 and the total expenditure Rs. 720. A scheme for the partial drainage of the notified area has been completed.

Section F.—Public Works.

Buildings and Roads.

The Buildings and Roads Branch of the Public Works Department places the District of Lahore in three Divisions, each in charge of an Executive Engineer, *viz.*, the First and Second Provincial Divisions and the King Edward Memorial Division.

Lahore I Division.

The First Lahore Division consists of three Sub-Divisions, all located at Lahore. The First Sub-Division is in charge of almost all the buildings at the head-quarters of the district, with the exception of the lunatic asylum and the jails, and has recently constructed the following important buildings, *viz.*, the Normal School and Medical School with the combined Boarding House for them, built in 1904; the Central Training College, built in 1905; the General Post Office, Lahore, built in 1905; the Public Works Secretariat, built in 1906; Queen Mary's College, built in 1912-13; and the Biological Laboratory of the Government College, built in 1914. Government House, Lahore, with its Council Chamber is also in charge of the Sub-Division.

The second Sub-Division executes works in out-stations and maintains the Borstal Central Jail and District Court at head-quarters and the main lines of communications (other than the Grand Trunk Road between Amritsar and Lahore) and the station roads.

The third Sub-Division executes works in the Lahore Central Jail, Male and Female, the Lunatic Asylum, the Vaccine Institute and the General Post and Telegraph Offices.

The Lahore Mall has been considerably improved during the past few years and certain station roads have been provided with foot-paths. During the last decade much attention has

CHAPTER III—F.

Public Works

Lahore I Division.

been paid to old buildings of historical interest. Núrjahán's Tomb at Sháhdara has been restored, the work being assisted by a munificent contribution from the Mahárájah of Burdwán; pumping plant has been set up on the old wells at the Shalámár and Sháhdara Gardens to supply water for the fountains and lawns; the thick growth of trees in the Hazúri Bágh round the marble Báradari of Mahárájah Ranjit Singh has been removed and the quadrangle re-arranged in grass plots and flower beds with water-channels and fountains; and the necessary repair and restoration work is being executed in most of the old buildings in the Fort of Lahore.

Lahore II Division.

The Second Lahore Division has two Sub-Divisions in the district besides the two Sub-Divisions of Amritsar and Gurdáspur outside it. The Lahore Sub-Divisions are the special Rávi Bridge Sub-Division for the construction of the new road bridge and "A" Sub-Division, which is charged with the maintenance of the section of the Grand Trunk Road from Lahore to Attári, and with the maintenance of certain Government buildings and Major Works. The acquisition of land and its preparation for a construction on a large scale of residences for Gazetted Government Officers and the irrigation of the mounds in the Agri-Horticultural Gardens by means of storage tanks and by an Ashford tube and centrifugal pump driven by the local electrical supply are the most noteworthy of the works in hand or lately carried out.

The King Edward Memorial Division.

The King Edward Memorial Division is a special one formed in May 1912 to deal with the King Edward Memorial and the works arising directly out of it, and the *establishment* employed varies of necessity with the actual amount of construction work in hand from time to time.

The Memorial takes the form of an extension of the Mayo Hospital and Albert Victor group of buildings, and the erection of a new Medical College with a separate Pathology, Physiology and Hygiene Block, the extension of the Materia Medica and Anatomy Blocks, a large Nurses' Home, a Students' Hostel, Staff Quarters and Private Patients' Wards, a Steam Laundry and a cold Storage Block as well as Servants' Quarters, etc. etc. In addition to the land specially acquired by the Committee, the Provincial Government made over the valuable Veterinary College site to provide the necessary room for the new buildings, and at the same time undertook to meet all recurring charges in connection with the enlarged institution. The handing over the Veterinary College site necessitated the building of a new Veterinary College. This has been located on Tapp Road, and, together with a Students' Hostel to accommodate 200 students,

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The King Edward Memorial Division.

facing the College on Lahore Road, has been estimated to cost just under 10 lakhs. The Government Press compound had to be annexed in order to find room for the large Hostel, and a much enlarged press (which is the last link on the chain) has been built in a much more convenient site immediately behind the Civil Secretariat.

Electrical supply.

The Lahore Electric Supply Company, who were granted a license to supply the electric energy to the public and Government within the municipal area of Lahore, having commenced their supply in November 1912, the appointment of a Government Electrical Inspector, with head-quarters at Lahore, to control the Company under the Indian Electricity Act of 1910, was created with effect from the 2nd December 1912. Later on, besides his duties as Electrical Inspector for the whole Province the execution and maintenance of all the electrical works at head-quarters was given to this officer. Almost all the Government buildings in Lahore have been provided with electric fans. Electric pumps for irrigation purposes have been provided in certain buildings and at Queen Mary's College, where a sewage pump has also been lately installed in connection with their septic tank. Large installations are being carried out at the King Edward Memorial Hospitals, consisting of lights, fans, lifts, and pumps, and various other kinds of medical apparatus worked by electricity. The new Government Press will be driven entirely by electric motors, and is further provided with electric lights and fans.

Irrigation.

The Lahore District falls within three circles of the Irrigation Branch of the Public Works Department, *viz.*, the Upper Bári Doáb (which includes not only the Upper Bári Doáb Canal but the Upper Sutlej Inundation Canals), the Lower Bári Doáb and the Upper Chenab. Each main canal is classed as a major irrigation work.

The Upper Bári Doáb Circle.

This circle, with head-quarters at Amritsar, is represented in the district by four Divisions, *viz.* the 2nd, 3rd and 4th of the Upper Bári Doáb Canal, each with its head-quarters at Amritsar and by the Upper Sutlej Division, with head-quarters at Montgomery.

2nd Division.

Of the two sub-divisions of the 2nd Division only one, *viz.*, Lahore with head-quarters at Lahore Cantonments, is included in the district. The main works carried out in the last 20 years are the construction of a new distributary, *viz.*, the Kaura, the remodelling of four distributaries and the extension of two, including the important Niázbeg Extension. Five new minors also have been added Two of the 3 sub-divisions of the 3rd division, *viz.*, Bedián and Bhamba, have their head-quarters in the district. Great

3rd Division.

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Public Works.

2nd Division.

activity has been shown in this Division in the last 20 years, as will appear from the following table :—

	Branches.	Distributaries.	Minors.
Constructed	...	2	34
Remodelled	...	2	1
Extended	1	3	6

4th Division.

The 4th Division supplies a considerable area in the Kasúr *tahsíl*. There are two sub-divisions—the head-quarters of both of which are outside the district—one at Raya and the other at Jandiála. There has been no fresh construction on a large scale, but the number of new minors added is no less than 16. The Upper Sutlej Inundation Canals form a separate sub-division of the Upper Bári Doáb Canal Circle. Only one of the 3 sub-divisions, *viz.*, Mamoke, has its head-quarters in the district. The more important works executed since settlement have been the construction of the Pakhoke Distributary and the Nainwál Branch of the Katora ; five minors have been added.

Upper Sutlej Division.

The Lower Bári Doáb Circle—2nd Division.

This circle has its head-quarters at Lahore. Of the two Divisions, *viz.*, the 1st and 2nd, part of whose area falls within the District, only one, *viz* the 2nd, supplies any irrigation. Neither of the two sub-divisions has its head-quarters in the district. The small area irrigated by the Gugera Distributary and its dependent Alpa Minor and by the Main Canal direct is included in the Satghara Sub-division with head-quarters at Satghara in the Montgomery District. The entire Lower Bári Doáb Canal is new, the original project and estimates having been sanctioned in 1905. The work has commenced in 1906 and finished in 1913. The chief works carried out, besides the excavation and construction of the Main Canal, with connected road and foot bridges, syphons, &c., and its Branches, were the training works erected upstream of the weir to keep the river under control, and last, but not least, the level crossing consisting of an inlet fall, which admits the water brought down by the Upper Chenab Canal to the river, a low weir surmounted by steel gates across its entire length for the regulation of the river supplies and a canal regulator to admit supplies into the the canal.

The Upper Chenab Circle.

The circle has its head-quarters at Lahore. The narrow belt of country following the right bank of the Rávi in the Chúnián *tahsíl* which is irrigated falls within two Divisions, *viz.*, the 4th, with head-quarters at Lahore, and the 5th, with head-quarters at

CHAPTER III.—G. Army. The Upper Chenab Circle

Gujránwála. The irrigated area of the 4th Division lies in two sub-divisions Marh and Mangtanwála and that of the 5th Division in one sub-division only, Muridke, but none of these three have their head-quarters in this district. The canal was very lately constructed. About a mile and a half of the main channel is in the Lahore district, which also comprises the following Distributaries, *viz.* No. 7 L (Sikhanwála), the Direct Minor, No. I. L-11-R (Mangtánwála) and No. 11 R. (Sayadwála).

Section G.—Army.

Regular Army.

The only military stations in the Lahore District are Lahore Cantonment (known as Mián Mír till 1906) and Fort Lahore. The cantonment lies about 4 miles to the east of the Civil Station and the fort is just outside the city of Lahore to the north and 7 miles distant from the cantonment.

Lahore Cantonment is the head-quarters of the 3rd (Lahore) Division, and before the outbreak of the European war the garrison consisted of the following troops :—

1 Royal Horse Artillery Ammunition Column.	1 Battalion, British Infantry.
Head-quarters; Royal Field Artillery Brigade.	1 Indian Cavalry Regiment.
	1 Indian Infantry Battalion.
2 Batteries, Royal Field Artillery.	1 Sikh Pioneer Battalion.

There are also stationed at the cantonment 4 Mule Cadres, 1 Camel Corps, 2 Half Troops Army Transport Bullocks, 1 Company Army Hospital Corps, and 1 Company Army Bearer Corps.

The garrison of Fort Lahore consists of a detachment of Gunners and of British Infantry from the Battalion in the cantonment. The Supply Reserve Depôt of the 3rd Division is also located in the Fort.

Volunteer Corps.

There are also the following Volunteer Corps in Lahore :—

Punjab Light Horse, Head-quarters, and one squadron.
Punjab Volunteer *Rifles*, Head-quarters and 3½ companies.
North-Western Railway Volunteer Rifles, one Battalion.

The following is a brief description of each Corps : —

Punjab Light Horse.

The Punjab Light Horse was raised at Lahore in 1893 by Mr. Arthur Grey who was the first Commandant. At first the Corps, which is recruited entirely from Europeans, consisted of about 50 members. The number of members now amounts to 423 efficients. As the Corps increased, additional troops were formed at Pesháwar, Ráwalpindi and Ambála. The present organisation is a Northern Squadron, comprising the Pesháwar, Ráwalpindi, Khewra, Lyallpur, &c., troops with its head-quarters at Ráwalpindi, and a Southern Squadron comprising the Lahore, Ambála, Montgomery, &c., troops with its head-quarters at Delhi, Lahore being retained as the Corps head-quarters.

CHAPTER III.—H.

Police and Jails.

Punjab Volunteer Rifles.

The Battalion was formed at Lahore in 1860, the first Commandant being Colonel A. A. Roberts, C B. Out of 13½ Companies, 3½ (A., B., C. and and St. Anthony's ½ Company) are at Lahore which also contains the head-quarters, and a portion of reserve Company. The strength of these companies is respectively 118, 110, 61 and 44, which is a great increase compared with the last few years. The Lahore reserve is 59 strong, and there are 19 officers at head-quarters. The Corps also possess a machine-gun section, a cyclist section and a small fleet of armoured motors. Connected with it is the Roberts Volunteer Club, a fine building flanked by good parade and playing grounds, close to which are the Headquarters Office and the Armoury.

North-Western Railway Volunteers.

The members of the Corps, which has a 2nd Battalion at Karáchi, are all Railway employés. The 1st Battalion, with an enrolled strength on 31st March 1914 of 1,058, has its head-quarters at Lahore. The Agent of the North-Western Railway is the Commandant of the Corps and the Traffic Manager commands the 1st Lahore Battalion.

Section H.—Police and Jails.

District Police—Superior Officers.

(*a*) The Lahore District forms part of the Central Range, which is in charge of the Deputy Inspector-General of Police, with head-quarters at Lahore. The Police force of the district is controlled by a Superintendent of Police with one or more Assistants or Deputy Superintendents, one of whom is always in charge of the Kasúr Sub-Division with head-quarters at Kasúr.

Recruitment.

The force is recruited mainly from the agricultural population of this and the surrounding districts.

Number of Police Stations.

There are 25 Police Stations, 6 of which are in Lahore and the suburbs and 19 in rural localities. Police Stations according to their size and criminality are in charge of one or two Sub-Inspectors, who, under the supervision of the Inspector and superior officers, are chiefly responsible for the prevention and detection of crime. They are aided by *Zaildars*, *Sufaidposhes* and village watchmen.

Inspectors, Constables and Rural Police.

The strength and distribution of the force are given in Table 47. There are 5 Inspectors at head-quarters who are in charge respectively of the Reserve (see below), city (intra-mural), Anárkali and Mozang, Naulakha and Mughalpura, and Cantonments. Owing to the extension of the Railway Colony a new Police Station was opened in Mughalpura in 1914. The district is divided into three Police Circles, the jurisdictions of which are conterminous with the *tahsíls*. Each is in charge of an Inspector with his head-quarters at Lahore, Patti and Chúnián respectively. In addition to the Police Stations there are outposts at Nankána, Devipura, Chánga Mánga and Rávi Bridge and a road post at Wágha.

Railway Police—Superior Officers.

The Superintendent, Railway Police, Southern District whose head-quarters are at Lahore, is in executive charge of the

CHAPTER III.—H. Police and Jails.

Railway Police of the district, and the Deputy Inspector-General of Police, Criminal Investigation Department and Railways, exercises administrative control.

Police Stations—(i) Head-quarters.

The Railway Police at Lahore are located in their own Police Lines situated on MacLeod Road, where recruits are trained and all miscellaneous work in connection with the interior economy of the force is carried out. The lines include a large parade-ground, quarter guard, magazine, armoury and clothing store, ten sets of quarters for European and Indian Upper Subordinates, separate married quarters and six barracks for head constables and constables; these buildings belong to, and are maintained in proper repair by, the North-Western Railway. At the Lahore Railway Station there is a Police Station built on the side of one of the platforms; the sanctioned strength of the staff consists of one Inspector, three European Sergeants, 3 Sub-Inspectors, 8 Head Constables and 36 Constables.

(ii) Outposts.

Outposts subordinate to the Lahore Railway Police Station exist at Lahore Cantonment East and West, Ráewind, Chánga Mánga, Badámibágh and Sháhdara. A second Railway Police Station in the Lahore District is established at Kasúr, which has a strength of one Sub-Inspector, 3 Head Constables and 10 Constables, with subordinate outposts at Kanganpur, Khem Karn, Waltoha and Patti.

Reserve Police Force and Punitive Posts.

There is an armed reserve of one Sub-Inspector, 2 Head Constables and 25 Constables, and a mounted force of one Sub-Inspector, 4 Head Constables and 32 Mounted Constables. Punitive posts are established in criminal villages as the necessity arises. There are at present 3 in the district.

Detection of crimes.

Statistics of cognizable crime are given in Table 48. The finger print system is largely used for the purpose of establishing the identity of criminals and in rare cases has been found useful as a means of detection.

Criminal Tribes.

(b) The criminal tribes of the district with the number, in each, registered under the Criminal Tribes Act, are given below:—

	Number exempted.	Number not exempted.	Total.
1. Baurias	220	28	248
2. Gutkas	9	20	29
3 Pakhiwáras	13	4	17
4. Sánsis ...	91	7	98
5. Dhillons	5	40	45

The Gutkas reside in Hudiára and the Dhillons in Dhilwán; the other tribes are more or less scattered.

CHAPTER III.—H. Police and Jails — Jails —

(c) There are three jails at Lahore, *viz.*, the District, the Borstal Central and the Female Jail. Formerly all three institutions were under the management of the same Superintendent, but in 1909 a separate Indian Medical Service Officer was appointed to look after the first two. Each jail has its own separate subordinate establishment.

The District Jail—Location and accommodation

The District Jail was converted on the 1st April 1915 from the Central Jail to the District Jail for the Lahore District. It receives all the male prisoners of the Lahore District and long-term male prisoners transferred from almost all parts of the Punjab. It has accommodation for 1,428 prisoners; the average daily population in 1914 was, however, actually 1,769. It covers 33 acres of ground and is built on the radiating principle. There are two octagons each in effect a separate prison with its own workshop, each of eight compartments, radiating from a Central Watch Tower; two separate enclosures contain respectively 100 solitary cells and a Juvenile Ward with separate cubicles; there is also a small prison for Europeans.

Health.

The health of the jail population has been satisfactory since 1891 when a tank supply was substituted for numerous shallow wells distributed over the jail enclosure which were a source of contamination.

Industries.

Prison industries consist of the weaving of blankets and cloths of various kinds, pottery, paper-making, the making of mats and floor cloths (*daris*), both of cotton and grass, weaving carpets of the Persian type and lithographic printing. There is a large lithographic press fitted with express machines of best type: the work in this department is done entirely by prisoners, who print forms, circulars and registers for the Judicial Courts, dispensaries and gaols of the Province. The average net profit of the whole manufactory for the year 1914 was Rs. 95,173. The cost of maintaining the Central Gaol in 1914 was Rs. 1,43,858 or Rs. 81·5 per prisoner.

The Borstal Central Jail—Accommodation.

The Borstal Central Jail is the old District Jail converted into a Central Jail on the Borstal system for convicts from all over the Province between the ages of 18 to 22, *i.e.*, of the "juvenile-adult" class, with sentences exceeding four months. There is accommodation for 1,800 prisoners in 7 enclosures, one of which contains the old District Jail; three more contain double-storied cellular sleeping barracks, each with accommodation for 50 convicts, and the remaining three are devoted to workshops and play-grounds. Arrangements for the mental, physical and moral development of the prisoners, which is the special feature of the

CHAPTER III.—I. Education and Literacy.

Borstal system, include (*i*) instruction in "the R's", (*ii*) drill, gymnastics and games, and (*iii*) addresses from teachers and preachers of every creed represented among the convicts on religion, temperance, &c., &c.

Health. Industries.

The jail has a good bill of health; in 1914 the mortality rate was 19·68 *per mille*.

The industries taught are those which are likely to be of use to the prisoners after release and include tailoring, carpentry, gardening, tent-making, mason's work, and cloth, *daris*, *newar*, carpet and chick weaving. The total expenditure on maintenance during the year 1914 was Rs. 1,49,085, giving a cost per head for maintenance of prisoners of Rs. 81-9-6.

The Female Jail.

The Lahore Female Jail has accommodation for 313 prisoners. It receives female long-term and life prisoners transferred from all parts of the Punjab, and all the female prisoners from the Lahore District. In 1914 it had an average daily population of 260. The industries carried on—knitting, sewing, carding, &c., are very insignificant. The cost of its maintenance is Rs. 16,318 or Rs. 62-12-3 per prisoner per annum.

Section I.—Education and Literacy.

Literacy of the people.

(*a*) In Table 50 are given the main statistics relating to literacy, the standard of which in the Lahore District is naturally above the average of the Province both for men and women, this being particularly the case in those parts which are nearest to Lahore. The other two *tahsíls* are not on the same plane as Lahore, which both includes the head-quarters of Government having a large number of offices, and is the focus of the main educational institutions and of a large number of trading firms. Literacy is somewhat higher in Chúnián than in Kasúr *tahsíl*, a fact which is explained by the larger proportion of non-agriculturists among the land-owning tribes, the labours of Christian Missionary Societies and the development of two new *mandis* with a preponderatingly Hindu population. In the matter of female education Lahore leads the Province. Advanced education flourishes among the City population of every sect. Among the more important religions of the district, Hindus are well ahead, the percentages of persons literate to total population being Hindus 14, Sikhs 5 and Muhammadans 3.

Lahore is the head-quarters of the Director of Public Instruction, Punjab; for inspection purposes the district lies within the Lahore Division and is controlled by the Divisional Inspector of Schools. The Inspectors of European Schools and the Chief Inspectress of Schools are also stationed at Lahore.

CHAPTER III.—I.

Education and Literacy.

University and Educational system and number of schools and scholars.

Schools.

(*b*) For the general outlines of present educational policy, for a sketch of its development since 1893-94, and for any information of a character which is not special to Lahore and the district, reference should be made to the Imperial Gazetteer of India, Punjab, Volume I, pages 133 to 143.

Detailed statistical information is given in Table 51 in regard to all the educational institutions of the district, which are open to inspection by the Education Department, their standard (whether Schools or Colleges, public or private, for either sex), and their management (whether Government, District or Municipal Board, aided or unaided). The following statement, which further summarises these returns, shows that there are 422 Schools and Colleges of every kind, with a total number of 30,774 scholars :—

Detail.		Standard.		Schools.	Scholars.
Public Institutions	Collegiate Education.	Arts Colleges		7	3,023
		Professional Colleges		4	752
	School Education, General, Boys and Girls.	High ...	Boys	9	6,036
			Girls	2	625
			Total ...	11	6,661
		Anglo-Vernacular Middle.	Boys	3	979
			Girls	1	80
			Total ...	4	1,059
		Vernacular Middle	Boys	6	1,446
			Girls	4	1,158
			Total ...	10	2,604
		Primary ...	Boys	159	9,715
			Girls	48	2,28[illegible]
			Total ...	207	12,003
Private Institutions ...		For Special Instruction.		5	807
		Advanced ...		3	56
		Elementary ..		171	3,809
GRAND TOTAL ...		...		422	30,774

(*i*) *Indigenous Schools.*—Indigenous methods of education, as developed by Government, are satisfactory. Indigenous aided

CHAPTER III.—I

Education and Literacy.

Schools.

schools are both for boys and girls, and the total number is 26 with an attendance of 1,032; in all these reading, writing and arithmetic are taught; the newly revised grant-in-aid rules, with their substantial improvement in the scale of rates, have given a fresh impetus to the starting of elementary schools by private agency. There is one *Pàthshála* Sanskrit School: the *Pádha* schools, ten in number with an attendance of 602, found in towns and large villages with a preponderating Hindu element, impart instruction in *Lande Mahájani* writing and native accounts. There are also 63 schools (total attendance 1,146), mostly held in mosques, where the *Qurán* is taught by rote.

(*ii*) *Primary Schools.*—On the 31st March 1914 there were 134 Primary Schools for boys with 8,551 pupils. Of these 88 schools, with an aggregate roll of 5,344, are managed by local bodies and the rest by private agency. The schools which have not as yet come under the influence of the Education Department number 91 with 2,367 pupils.

(*iii*) *Secondary Schools.*—The only directly State-managed institution is the Lahore Central Model High School (q. v.) and the reasons for this are historical; most of the other institutions described in the detailed list below have been established on the grant-in-aid system. In Lahore, as in the rest of the Province, secondary education is an extension of the primary stage and the pupils proceed to the secondary course after going through the primary, and often without change of school. Secondary education is either Anglo-vernacular or vernacular, the latter, as a rule, not going beyond the middle stage, the studies being entirely conducted through the medium of Urdu. These vernacular secondary schools are a sort of advanced primary schools, maintained by the District Board to act as feeders to the schools for the training of village school teachers. They have no attraction for the comparatively well-to-do, and the new schools started by private enterprise are those which provide an English education. But it cannot be denied that these vernacular schools are a boon to the poorer classes by placing higher elementary education within their reach at a nominal cost. An Anglo-vernacular school may stop at the middle stage, as the Mozang or Chúnián Schools, or go right up to the high—the stage lying between the middle and collegiate stages—as in the case with almost all the important institutions in the city of Lahore.

Special emphasis is given to the study of English from the start in the 4th class of the primary stage, and in the high classes English becomes the sole medium of instruction.

CHAPTER III—I.

Education and Literacy.

Schools for special classes.

(c) The Railway Technical School and Victoria Diamond Jubilee Hindu Technical Institutes, both situated at Lahore (see below under Main Educational Institutions), provide facilities and supply a growing demand for study in industrial subjects. The District Board revived at Kasúr in 1914, in the form of a primary school with technical instruction in carpentry and drawing, an old school of industry which had long ceased to exist; fresh technical subjects are to be added to the course and it is hoped to raise the school to the middle standard. A revised curriculum of elementary agricultural education is now a feature of the Primary Schools. The Elementary School for the Blind at Lahore (see below) is making satisfactory progress. Missionary bodies maintain a fairly large number of schools for the benefit of their Christian converts, mostly taken from low castes; but there is no purely low caste school in the district, since not only do other castes study in these schools, but children of these humbler classes usually find admission to ordinary schools. There is, however, some prejudice against these boys sharing the same *farsh* or bench with Hindu boys and consequently they are often seated separately.

Female education.

The Lahore District heads the province in the number of girls' schools and in the standard of education. The principal obstacle is the want of qualified teachers. The high schools are nearly all well staffed, but this cannot be said of middle girls' schools. The growing popularity of the Normal School for Women should help in time to remove this great defect. The curriculum includes good needle-work and cooking. In the interior of the district the rate of advance is as yet slow.

Educational institutions — The Punjab University and Affiliated Colleges.

(d) The University of the Punjab and nine of its affiliated Colleges are in Lahore. The other twelve Colleges are scattered over the territories assigned to this University, in the quadrilateral, Pesháwar, Srínagar, Delhi, Baháwalpur. There were in 1915 about 3,560 College students and 150 College teachers in Lahore.

The University is a Corporate Body established at Lahore in the year 1882 by Act XIX of the Governor-General of India in Council. This Act was amended in 1904 by the Indian Universities Act (Act No. VIII of 1904). The functions of the University include: (a) the holding of examinations and the conferring of degrees, (b) the general control of affiliated Colleges, (c) the provision of instruction and facilities for study. During the first twenty years of its existence the University was little more than an examining body. Instruction was provided by the University itself in Law, Oriental Languages, Oriental Medicine

CHAPTER III.—I.

Education and Literacy.

The Punjab University and Affiliated Colleges.

and Elementary Engineering; but with the exception of Sanskrit all these subjects were starved for lack of funds. Colleges were "recognized," that is their students were admitted to examinations, but no enquiries were made into the conditions under which the Colleges were working. Since 1904 the system of affiliation and inspection of Colleges has been introduced. The Syndicate is now in touch with the work of all the Colleges; information is supplied as regards accommodation, equipment, residence, staff, time-table, finance and other matters; and a general control is exercised by regulations, advice, and the determination of the conditions of affiliation. At the same time, especially since 1912, steps have been taken to develop the teaching side of the University. These include the institution of Professorships in Arabic and Classical Sanskrit and of Special Lectureships, the extension of the University Library, and the building of the University Observatory.

The Body Corporate or Senate of the University consists of (*a*) the Chancellor (the Lieutenant-Governor of the Punjab *ex officio*), (*b*) the Vice-Chancellor (appointed by the Chancellor from among the Fellows), (*c*) *ex-officio* Fellows including the Chief Judge of the Chief Court of the Punjab, the Bishop of Lahore, the Director of Public Instruction in the Punjab, the six representatives of Ruling Chiefs, (*d*) 75 ordinary Fellows each holding office for five years, of whom ten are elected by registered graduates, 5 are elected by the Faculties, and the remainder nominated by the Chancellor.

The Executive Government of the University is vested in the Syndicate which consists of the Vice-Chancellor, the Director of Public Instruction, and fifteen members elected by the Fellows of the five Faculties (Oriental Learning, Arts, Law, Medicine, Science and Engineering). The chief executive officer is the Registrar. Each Faculty consists of the Fellows assigned thereto by the Senate, and not more than half that number of added members. The Faculties elect eighteen Boards of Studies. For the powers and procedure of these bodies, and the regulations relating to the various degree courses and examinations and the like, references should be made to the Punjab University Calendar published annually.

History.—The history of the movement which led first (in 1869) to the establishment of the Punjab University College and subsequently to the raising of this institution to the status of a University has been fully set forth at pages 135 and 136 of the Imperial Gazetteer of India, Punjab, Volume I. There also is given an account of the original organisation of the University.

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The Lahore Gazetteer of 1893-94 (Chapter V, Section B) gives an account of the development of the University during the first decade of its existence. This was the period of the Chancellorships of Sir Charles Aitchison and Sir James Lyall. The inception of the University had been marked by a conflict between the western or modern ideals represented by the University of Calcutta, whose sphere extended to the Punjab, and the conception of an Oriental University formulated by Dr. Leitner which had appealed to many of the original donors. The modernists won the day and the Oriental scheme survived only in the Oriental Faculty and the Oriental College. This conflict of ideals however continued to influence the discussions on the application of endowed funds and the framing of regulations for examinations. Oriental Law and Oriental Medicine were unable to hold their own; and the University soon ceased to hold examinations in these. By the end of this period modern ideals had definitely triumphed, and under the guidance of Sir William Rattigan, one of the most distinguished Vice-Chancellors, the lines of development for the next ten years were firmly fixed. The second decade (1892–1902) coincides with the Chancellorships of Sir Dennis Fitzpatrick and Sir William Mackworth Young. This was a period of steady growth not marked by any striking change. The examination machinery was elaborated; and efforts were made to encourage the teaching of Science and the practice of athletics. The third decade (1902—1912) was marked by very important changes. Under the provisions of the Indian Universities Act of 1904 the constitution of the Senate was reformed, and the whole of the regulations revised. The outstanding features of these changes were the strengthening of the personnel of the Senate and Faculties by the inclusion of a larger proportion of teachers and of educated men, the affiliation and inspection of Colleges, the development of Colleges under this stimulus supplemented by grants-in-aid, and the discouragement of private candidates. The work of the Faculties was supplemented by that of newly-created Boards of Studies. The increased interest in University affairs is shown by the much larger numbers attending all meetings. Previously combined meetings of the Oriental and Arts Faculties had been known to attract only five Fellows: by the end of this period any such meeting was attended by at least fifty members. The great change involved in the affiliation of Colleges has been indicated above. The University soon found its work and responsibilities greatly increased by the general control of Colleges. In the meantime although the Anglo-Vernacular Middle School examination had been abolished, the complexities of the exami-

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nations increased owing to the introduction of new subjects, and of Honours Papers, and owing to the increasing numbers of candidates for a Master's Degree. This period saw also the first materialisation of the University Buildings scheme, that had been discussed for some years previously. In 1906 was completed the University Hall containing a hall (150 × 60 feet) for Convocation and examination purposes. Several Colleges erected new buildings, new hostels and new laboratories with up-to-date equipment. The University Library after 20 years of neglect was practically refounded. Thanks to the liberality of the Government of India, half a lakh of rupees was spent on new books. Temporary accommodation was provided in the University Hall pending the erection of the University Library Building. A gift by Mr. Hugh Melville Percival, Presidency College, Calcutta, of his private collection of over 5,000 volumes formed a valuable accession. There were several changes in the Chancellorship during this period, Sir Charles Rivaz being most closely associated with the changes immediately arising out of the Indian Universities Act, and Sir Louis Dane with the developments at the end of the period. The Vice-Chancellors associated with this work were Sir Lewis Tupper, Sir P. C. Chatterji, and Sir Thomas Gordon Walker. Since 1912 progress has been made in connection with University Buildings. The first block of the University Library is already found inadequate for a collection of over 30,000 volumes, and an extension is in progress of construction. The site and building of the Convent Girls' High School has been acquired for the Law and Oriental Colleges. The institution of special lectureships marks the beginning of what may prove an important development in the direction of evolving or teaching University in Lahore.

Tables showing numbers of candidates appearing at each examination for each year since the foundation of the University are available elsewhere. Here it may suffice to note that the numbers of candidates have risen from 1,883 to 1,915 as follows :—

Matriculation (formerly "Entrance") examination, Arts and Science Faculties form just over 300 to over 5,000.

Intermediate from 42 to 1,400.

B.A. and B. Sc. from 17 to 950.

M.A. and M. Sc. from 5 to over 50.

This rise in numbers has been particularly rapid during the last few years.

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The following are the main schools and other such institutions :—

A—SCHOOLS.

I.—European Schools

1. *The Cathedral Boys' High School*—Was established in 1872. There are 61 pupils on the rolls, 21 of whom are boarders and the remaining 40 day scholars. Of these ten are non-Europeans.

The buildings are fairly well furnished with the necessary equipment and are provided with electric fans and lights. The staff consists of three masters and three mistresses. Since 1913 the boys (51 in number) of the Cathedral Orphanage have been taught in the classes of this school, but the two schools are kept quite distinct in every other way. Elementary Science, practical and theoretical, has recently been added to the curriculum, and the school, which has a small endowment, has grown in popularity in the last two years. There are six free pupils.

The average total cost per boy for last year was about Rs. 300, of which the average fee paid was Rs. 120.

2. *Cathedral Girls' High School*—Was opened in 1888. The number of scholars is 79, of whom 53 are girls and 26 boys; of these 20 are Railway children. Only 9 girls and 3 boys live in the boarding house; the rest of the pupils are day scholars. The girls of the Cathedral Orphanage, except those under training on the domestic and technical side, are now (since 1913) taught in the classes of this school, but otherwise the two schools are kept quite distinct. This measure has led to economy and increased efficiency. The staff is very efficient and ample for the work, the accommodation sufficient and the equipment quite satisfactory.

3. *St. Anthony's High School*—Was established in 1892. There are on the rolls the names of 121 pupils. Railway children number 61 : the number of boarders is 63, of whom 4 are non-Europeans. The boarders pay the full fee, 32 pay at reduced rates, and the remaining 21 are free boarders. The school is managed and staffed by Brothers of the Order of Saint Patrick. The building is fairly commodious, the appliances very fairly satisfactory and the staff quite sufficient.

4. *Convent Middle School.*—This school, which was started in a small private house in 1877, was formerly opened in the Convent at Anarkali in 1880. It is attended by 102 pupils, 92 of whom are girls and 10 boys. Fifteen pupils are Railway children. The school is taught and managed by Nuns of the Order of Jesus and Mary. The number of boarders is 41, several of whom, being poor, pay no fees. The Old Convent buildings in Anarkali were sold in 1912 for a large sum of money. An excellent new building is under construction, and will be completed in October 1915. Furniture and appliances are generally satisfactory. The staff comprises 5 Nuns.

5. *The Cathedral Boys' Orphanage Middle School*—Was established in 1872. This is a boarding school, supported by subscriptions from the Diocese of Lahore and controlled by an influential managing committee. There are 51 names on the rolls, and all the pupils are Europeans or Anglo-Indians, belonging to the Church of England. Only 2 boys pay the full

fees of Rs. 15 per mensem, some pay at reduced rates, and the rest of the pupils are free, having been certified by Magistrates as indigent. The new buildings on the Multán Road are excellent and well furnished. The staff is adequate; a *mistri* is employed for instruction in carpentry.

6. *The Cathedral Orphanage Girls' Middle School.*—The Cathedral Orphanages were established in 1872. In 1912, however, the schools were removed from the vicinity of Kila Gujar Singh on Nicholson Road, Lahore, to the present site on Hall Road. The rolls contain the names of 41 girls, all of whom are boarders. Of these 19 are Railway children. Nine girls are undergoing special training in Industrial subjects. The buildings are excellent. They have been carefully designed and well built. There is also a separate house for domestic training. The furniture and apparatus are generally satisfactory and the staff is very efficient.

7. *The North-Western Railway Primary School*—Is attended by 90 pupils, 52 of whom are boys and 38 girls. All the scholars are Railway children and all pay full fees. The building is excellent and well equipped and the staff is a good one.

8. *The North-Western Railway Apprentices' Technical School*—Was opened in 1898. There are 52 apprentices on the rolls, divided into two classes,—senior and junior. The former class meets on Monday, Wednesday, and Friday and the latter on the other three days of the week. The classes are held in the mornings after which the boys go for actual workshop practice in the large Locomotive Shops of the Railway. The staff comprises 5 masters. Most of the teachers are qualified for the work entrusted to them, and two of them hold certificates of institutions in Great Britain and Ireland.

II.—*Schools for Indians.*

9. *The Central Model School, Lahore*—Has developed rapidly from the old *Zila* school, the latest important additions to the accommodation being made by Government in 1913 at a cost of Rs. 60,000. When the scheme for a training College for secondary schools was matured this school was selected to serve the purposes of a practising school. The teaching comprises all stages from the Infant to the Matriculation (Arts and Science faculties) and the Clerical and Commercial standard. The management of the school is vested in a Headmaster under the direct control of the Principal of the Central Training College. The fees charged are somewhat higher than in other Government and Board Schools. There is a small hostel, with accommodation for 45 boys, attached to the school. The attendance is 917.

10. *The Rang Mahal Mission High School, Lahore.*—Founded in 1849. attendance 873. Named after a large house in the centre of the city, in which it is now situated. Was the first English School to start in the district, founded by the Rev C. W. Forman with a missionary colleague. The school once had as many as 20 branches and an adult night school; its present constitution is a main school and 3 branches. The present extended accommodation and up-to-date equipment date from 1912.

11. *The Daya Nand Anglo-Vedic High School, Lahore*—Founded in memory of Swami Daya Nand, the founder of the Arya Samaj, with the object of encouraging the study of Hindi and Sanskrit and of combining secular with moral and religious education, is now numerically the largest

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in the province. The school building was erected on its present site near the District Courts in 1891, and important additions have recently been made, especially in 1911. No fees are levied at all in the lower primary department, nor in the upper department in cases where the parents' income is less than Rs. 50 per mensem.

In the middle and high departments fees are generally lower than in the other high schools. Hindi forms the medium of instruction in the primary and middle departments. The Headmaster is provided with residential quarters, and the number of resident students was 300 on March 31st, 1915. The total attendance is 1,545.

12. *The Dayal Singh High School, Lahore.*—Situated at the Hira Mandi. Attendance 788. Owes its existence to the philanthropy of the late Sardar Dayal Singh of Majitha. Before 1904 it had no primary classes, nor had it any boarding house to accommodate outsiders. It was brought on the aided list in 1907 Since then the institution has been developing steadily. Regular provision for moral teaching is a special feature. The school has no building of its own.

13. *The Islamia High School.*—Is now the premier Muhammadan educational institution in the Punjab. The germ from which it developed was a primary school started in 1886 by the Anjuman-i-Himayat-i-Islam for the special benefit of Muhammadan boys. Free studentships are granted in deserving cases and certain orphans are educated free of charge. Attention is devoted to moral and religious instruction and every student is required to take part in physical instruction. In 1911 the school, owing to a very rapid growth in numbers, was split into two schools, Nos. 1 and 2. No. 1 School is held in a fairly capacious rented house, but the situation is cramped and the surroundings not altogether healthy. No. 2 School has made a fair start; it was held in an unsuitable rented house until 1915 when it was shifted to its new building, the site of which was largely provided by private munificence. The school house has been erected by handsome donations from the promoters of the institution supplemented by a liberal grant from provincial revenues. The total attendance of both schools is 1,030.

14. *The Municipal Board High School, Kasur*—Has developed from a vernacular Primary School, through the Anglo-vernacular middle grade, attaining the status of a high school in 1891. In 1886 the municipality erected a large building outside the town for it at a cost of Rs. 10,000, and additions were made in 1891. Attendance 577.

15. *The Victoria Girls' High School, Lahore.*—Situated in Nao Nihal Singh's *haveli.* The present name of the institution, formerly known as the Central Female Normal School, dates from the Jubilee of Her late Imperial Majesty Queen Victoria. It was the first school to send up girls for the Middle Standard examination and was for many years the leading vernacular school in the province. Since the arrival in 1887 of the present Lady Superintendent the school has been growing steadily. To keep the classes within reasonable limits a system of fees was introduced. The school would have been raised to the high

grade some time ago but the Punjab Association, who now manage it, had not the funds to spend on it. Government has however taken over charge of the school and has added high school classes. The staff has recently been further strengthened, and other improvements are under contemplation. Normal classes for the training of teachers opened in connection with the school have been discontinued since the establishment of the Government Normal School for Women. The first woman students to appear for the Senior Vernacular Teachers' Certificate Examination came from this school. The attendance is 403.

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16. *The Queen Mary College, Lahore.*—Opened in 1911. Attendance 48. The College is the result of representations on behalf of a High School for girls of good family, made by certain Indian ladies on the occasion of the visit to Lahore of Their Royal Highnesses the Prince and Princess of Wales in 1905. Daughters of Chiefs and Rajas are *primâ facie* eligible for admission; daughters of other persons are not eligible unless there are reasons for admitting them. The aims of the school are to give the girls an education which, while befitting their position, and assisting them in social intercourse with English ladies, shall be essentially womanly, the Indian ideals of self-sacrificing motherhood and simplicity of life being held sacred. The curriculum is specially devised to give effect to their principles; no distinct sectarian teaching is given, but the virtues of modesty, gentleness, obedience, etc., are inculcated. There is also a preparatory school for boys aged 4-11, who live in a separate house under an English lady.

17. *The Kinnaird High School for Girls, Lahore.*—Situated on the Empress Road. Founded 1879. This school, which has existed for a number of years before and was managed by the American Presbyterian Board of Foreign Missions, was revived in 1879 under the name of the Christian Girls' School. In 1886 it was raised to the High Standard. Junior Anglo-Vernacular classes to train young women for higher teaching work in schools were opened in 1901, and since then this branch has become an important feature of the work of the school. In 1913 a College Department was affiliated to the Punjab University. Though primarily intended for the education of Christian children the school admits a number of Hindu, Muhammadan and Parsi children as day scholars and boarders. Attendance 195.

18. *The Railway Technical School, Lahore.*—Founded in 1889. Attendance 456. This school, which is entirely supported by Government, was founded in connection with the Railway workshops for the purpose of giving a technical and industrial education to the sons of artisans employed therein. It continues to be the leading institution of the kind in the province. Its alumni experience little or no difficulty in securing remunerative employment on leaving school.

19. *The Victoria Diamond Jubilee Hindu Technical Institute, Lahore.*—The object of this institution is to attract Hindu lads to industrial training. The recent addition of classes in elementary electrical engineering, and for fitters and drivers has increased its popularity.

20. *Elementary School for the Blind, Lahore.*—This school, founded in 1915 and housed at the Railway Technical School, teaches reading

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and arithmetic on the Braille method together with industrial work. It is making satisfactory progress. There are fourteen pupils.

B.—TRAINING INSTITUTIONS.

(1) *The Central Training College, Lahore.*

(See under Affiliated Colleges of the Punjab University.)

(2) *Lahore Normal School.*

Attendance 104. The school was established in 1856 with the object of improving the old methods of teaching by training teachers for employment in the purely vernacular institutions of those times, *viz.*, Kote Schools, *Maktabs, Padha* Schools and *Patshalas*. The school developed with the times, until in October 1904 a separate fine building, with spacious rooms and a well-ventilated and adequately-furnished boarding house, for about 120 men, at a cost of about one lakh of rupees were provided for it. The staff of the school consisted at first of only a few Urdu-knowing teachers, but from 1872 onwards it has been under a competent Indian graduate as Headmaster with an adequate staff. In 1909 the scheme of studies was revised and brought into conformity with the altered curriculum of the Primary Schools of the Province. The course of study extends over one year and is in conformity with the standard examination for Junior Vernacular Certificate. On passing the Junior Vernacular Certificate Examination the men are appointed as Head or Assistant Teachers in Primary Schools. To qualify for admission to a Normal School, a candidate must have passed the Middle School examination (Vernacular or Anglo-Vernacular) or an equivalent class examination in an Anglo-Vernacular School and must be selected by the Deputy Commissioner of the district. Candidates are generally Government stipendiaries, each receiving a stipend of Rs. 8 per mensem. The school, which is the largest normal school in the Province, is under the direct control of the Education Department and is under supervision of the Principal of the Lahore Training College. It is maintained from Provincial revenues, the amount expended in 1913-14 being Rs. 16,000.

3.—*The Normal School for Women, Lahore.*

Established 1905. Attendance 107. Has as its object the provision of training for those girls and women who intend to take up training as a profession. A boarding house is attached. The course of study followed is that prescribed by the Punjab Education Department for the Junior and Senior Vernacular examinations for women teachers, the period of training for both examinations being two years. Students who are working for the Junior Vernacular Examination are often encouraged to appear privately for the Middle School Examination.

C.—AFFILIATED COLLEGES OF THE PUNJAB UNIVERSITY.

*1.—Oriental College, Lahore.**

The Oriental College was established in 1870 by the Senate of the Punjab University College, and was taken over in 1882 by the Punjab University, which has since maintained it in accordance with the provisions of its Statutes.

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The object of the Oriental College, as reorganized in 1888, is—

(a) to impart a knowledge of the Sanskrit, Arabic and Persian Languages and Literatures on a sound basis and in accordance with historical methods, to students who wish to prepare themselves for the High Proficiency and Honours Examinations of the Punjab University for these Languages;

(b) to prepare students for the High Proficiency in Punjabi Examination of the Punjab University by imparting to them a scholarly knowledge of the history of the Punjabi Languages and its Literature.

The College is managed by the Syndicate under the control of the Senate. The Oriental College has been entrusted since 1884 with the tuition of the Government College students in Oriental Languages, a special grant being contributed by Government to meet the cost connected with this arrangement. The expenses for the maintenance of the College are met partly by the annual allotment made in the Budget of the Punjab University, and partly from the income of certain endowments of the University. Translators are employed along with the permanent teaching staff in the tuition of College classes. There is a boarding house attached to the Oriental College in the *Hazúri Bagh* quadrangle, where 51 students are in residence.

II.—Law College, Lahore.

The Law College was founded in the year 1870 under the name of the Law School with the object of imparting legal knowledge to candidates preparing for the Mukhtarship and Pleadership examinations. The School has since the last few years been converted into a College with a whole-time Principal and Staff, and prepares students for the degree of Bachelor of Laws, and First Examination in Law of the Punjab University. The management of, and supervision over the College is, subject to the control of the Syndicate and Senate, vested in the Law Faculty. The Law College and Hostel are located in a portion of the handsome building formerly occupied by the Convent Girls' School just opposite the Senate Hall. The Hostel is on the first floor and accommodates about 40 resident students—the accommodation being hardly sufficient. The building of a separate College and Hostel is in contemplation. To the College is attached a valuable Library.

This College was opened in 1864 and was affiliated to the University of Calcutta in that year. It is under the control of the Director of Public Instruction, Punjab, and is the only Arts College maintained by the Punjab Government. The Delhi Government College was incorporated with it in 1877 It prepares students for the examinations of the Punjab University.

*III.—Government College, Lahore.**

Intermediate (Arts and Science Faculties), B.A., B.Sc., M.A., and M.Sc. Since the incorporation of the Punjab University in 1882, 228 students have obtained the M.A. and M.Sc. degrees, and 759 the B.A. and B.Sc. degrees from this College The College is located in a handsome gothic building, with a large clock-tower, situated on an eminence near the city of Lahore. It

*Recognized by the Syndicate for the award of Arts and Oriental Scholarships, 31st October 1888.

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comprises, besides class-rooms, a large Examination Hall, a Library, and extensive laboratories, physical, chemical and biological. There is also a well-stocked museum of minerals, rocks and fossils, presented by the Geological Department; and a large Biological Museum. The building was begun in 1872 and completed in five years, the cost being 3½ lacs. Since then the grounds of the College have been extended, and now comprise fields for cricket, football, hockey, and tennis; and the old Presbyterian Church near the College has been acquired and converted into a gymnasium at a cost of Rs. 15,000. A new hostel or boarding house for Hindus and Muhammadans, built at a cost of Rs. 70,000 and situated in the grounds, was opened in 1891, and is always fully occupied. No student is allowed out after lock-up. Near it is a residence provided by the Government for the Principal, who has the immediate supervision of the boarders and is assisted by a resident Superintendent. Five English Professors also live in the College permises. The number of students on the rolls is at present 551. The College is maintained by the Provincial Government at a cost of about Rs. 1,88,317 per annum. The income from fees during the year 1914-15 was Rs. 59,797. A number of the students are holders of Government, University Scholarships, the total expenditure on scholarships for 1914-15 being Rs. 18,031. The Principal is empowered to admit poor students on half fees up to a limit of ten per cent. of the number on the rolls. Prizes are awarded to distinguished students in all subjects. By an arrangement made in 1884, the tuition of the students in Oriental Languages was entrusted to the Oriental College, but recently Professors of Arabic, Sanskrit and Persian have been added to the Government College Staff. The other subjects included in the University Courses up to the M.A. Standard are provided for in the College, *viz*, Intermediate—English, Physics and Chemistry, Philosophy, Mathematics, History and Biology; B. A.—English, Pure and Applied Mathematics, History, Economics, Physics and Chemistry; B.Sc.—Botany, Zoology, Physics and Chemistry; M.A.—English, Mathematics, History and Economics; and M. Sc.—Botany, Zoology, Physics and Chemistry.

*IV.—Forman Christian College, Lahore.**

This institution was established in the year 1866, and during that and the three following years furnished instruction for students preparing for the F.A. and B.A. Examinations of the Calcutta University. At the close of this period, owing chiefly to the death of Rev. Mr. Henry, the Principal, the work of the College was suspended. In 1886, the classes were again reopened and in 1888, the first candidates from the institution appeared in the Intermediate, and in 1890, the first in the B.A. Examination of the Punjab University. The College buildings, situated on Roberts' Road, near the Bengal Bank, were opened in the year 1889 by His Excellency the Marquess of Lansdowne, Viceroy and Governor-General of India. The site on which they stand is a gift of the Punjab Government, who also gave a building grant of Rs. 20,000. This building consists of:—(1) A main building, with Hall, Library, and Lecture-rooms, capable of accommodating 500 students; (2) College Hostel; (3) Kennedy Hall for Christian students; (4) Newton Hall on Napier Road; (5) the Principal's House; (6) the Chatterjee Science Building; and (7) "The Abbey." The cost of these buildings was approxi-

*Recognized by the Syndicate for the award of Arts Scholarships, 1st May 1889.

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mately Rs. 2,55,000. The College is an aided institution, and conforms to the Government regulations as to attendance and fees. It is under the care of, and supported by, the Punjab Mission of the American Presbyterian Church, United States of America; and is controlled by a Board of Trustees appointed by that Mission. The institution has no endowment, either for its maintenance or for scholarships and prizes, but large number of its students are the recipients of Government, University or Municipal Scholarships. Boarding house accommodation is provided for 300 students. Students are prepared for the Intermediate, B.A., B.Sc. and M.A. Examinations of the Punjab University. The number of students enrolled in five classes is (31st March 1914) 600, of whom 329 are Hindus, 154 Muhammadans, 79 Sikhs, 34 Christians, and 4 others.

*V.—Dayanand Anglo-Vedic College, Lahore.**

The Dayanand Anglo-Vedic College (School Department) was opened on 1st June 1886. The 1st and 2nd year classes were opened in May 1888 and 1889, the 3rd and 4th year classes in the beginning of 1893 and 1894 and the M.A. class in Sanskrit in 1895. The College was established in honour of Shri Swami Dayanand Saraswati, the founder of the Arya Samaj, with the following objects :—

(*a*) to encourage, improve, and enforce the study of Hindi Literature ;

(*b*) to encourage and enforce the study of Classical Sanskrit and of the Vedas;

(*c*) to encourage and enforce the study of English Literature and Sciences, both theoretical and applied ;

(*d*) to provide for technical education in the country.

The Dayanand Anglo-Vedic School is situated on Lower Mall adjacent to the Lahore Government College, but the College Department is accommodated in the College premises, Court Street.

The amount of endowment for the maintenance of the Institution, at present in the hands of the Managing Committee, is Rs. 11,56,768-1-8. The Dayanand Anglo-Vedic College prepares boys for the Matriculation, Intermediate, B.A., F.Sc., and M.A. Examinations. It teaches English, Sanskrit, Persian, History, Mathematics, Philosophy and Physical Sciences (Physics and Chemistry). Scholarships and stipends are provided for students of the College. There are two Boarding Houses in connection with the College.

VI.—The Islamia College, Lahore.†

This College, the only Muslim National College in the Province, was established by the Anjuman-i-Himayat-i Islam, Lahore, with the object of providing young Muhammadans with higher Western education accompanied by moral and religious instruction. As it is specially intended for the sons of poor parents, the fees charged are low. The College was founded in 1892, and was confined to Intermediate Classes up to 1900, when B.A. Classes were introduced. In 1905 arrangements were made for teaching Arabic up to the M.A. standard. The subjects now taught in the F. A. Classes are :—English, Mathematics, Philosophy, History, Physics and Chemistry, Arabic and Persian.

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*Recognized by the Syndicate for the award of Arts Scholarships, 1st May 1889.

†Recognized by the Syndicate for the award of Arts Scholarships, 10th May 1895.

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The subjects taught in the B. A. Classes are :—English, History, Economics, Philosophy, Applied Mathematics, Pure Mathematics, Arabic and Persian. For the M. A. only Arabic is taught. Biology classes were started in September 1914, in preparation for the F. Sc. Examination. Besides these University subjects, Islamic Theology is taught every day to all classes. The College has no large permanent endowments, but is maintained by the voluntary subscriptions of the Muslim public. It is under the general management of a Committee (of which the Principal is an *ex-officio* member), which is a Sub-Committee of the General Council of the Anjuman-i-Himayat-i-Islam.

The College is now housed in a handsome block of buildings, occupying a site of over eight acres between Brandreth aud Railway Roads. The main College building, built in the Moghal style, consists of the fine Habibia Hall flanked by two large wings, containing the class rooms and science laboratories. The science laboratories are provided with gas and water laid on, and additional apparatus The Library and Reading Room form a separate block, one room of which is furnished as a temporay gymnasium. The Boarding House, called the Rivaz Hostel, consists of 36 cubicles and 21 dormitories, capable of accommodating 150 boarders, built round an open quadrangle, with kitchens, dining hall, bath-rooms, etc., attached. The completed buildings have cost nearly three lakhs of rupees to erect. A full-time Superintendent resides in the Rivaz Hostel and acts under the direction of a Hostel Board. He is assisted by monitors, appointed by the Principal from among the senior students. The hostel is inspected once a week by the Principal, or a member of the staff, and order and cleanliness in the rooms encouraged. The College has a good Library and a well-furnished Reading Room; and it issues a monthly magazine called "The Islamia College Magazine." The Tutorial System is in force. For the development of the debating and public speaking powers of the students, there are Literary Societies which meet every week, and a Debating Union, which is held once a month. Though the smallness of the site is a handicap in the way of the development of College athletics, provision is made for the usual games; and the College Football, Cricket, Gymnastic and Swimming Teams have given a good account of themselves in the University Sports Tournaments All students who do not regularly play some game, exercise in the gymnasium daily. The number of students on the rolls in Septmber 1914 was 335.

VII.—Dyal Singh College, Lahore.

The institution owes its origin to the noble generosity of the late Sardar Dyal Singh, Majithia, who left a large landed property to create for the city a College that should be worthly of its greatness. The foundation stone was laid by His Honour Sir Louis Dane on 3rd May 1910. The scope and character of the College cannot be better defined than in the comprehensive terms of the will and testament of Sardar Dyal Singh, Majithia :—

"It shall be the duty of the said Committee of Trustees to establish and maintain, out of the funds and income of the property mentioned in parágraph VIII hereof, a First Class Arts College, with or without any School Classes as to the said Committee may appear desirable, to be called by such name as the said Committee may decide, for the spread and dissemination of a sound liberal education in this Province, in which College every attempt shall be made to inculcate pure morality and the principles of Theism

consistent with the tenets of the Brahmo religion by the personal example of the teaching staff as far as possible and by instituting a course of lectures and by such other similar means as may to the said Committee appear proper and feasible. Save as above provided, the said College shall in other respects be a thoroughly efficient non-denominational College affiliated to the Universities of Calcutta and Punjab, teaching up to the highest standards and imparting instruction on the same lines generally as the Government Colleges in this country, and looking after and promoting the physical, mental and moral well-being of the pupils on its rolls."

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Education and Literacy.

Main Educational institutions.

The College is affiliated to the Punjab University in the following subjects :—

Arts Faculty—English, Mathematics (A and B Courses), History, Philosophy, Economics, Sanskrit and Persian to the B. A. Standard, Physics and Chemistry to the Intermediate Standard.

Science Faculty—Biology and Physical Science to the Intermediate Standard.

'Honours' Courses for B. A. Classes are also taught.

The government of the College is vested in the Board of Trustees. There is a College Sub-Committee appointed by the Board of Trustees.

The College is an avowedly Theistic Institution. Its fundamental convictions are that Truth knows no limit-lines of creed and clime, and that education must be transfused with the ethical and spiritual Ideal. Special lectures on non-sectarian topics are delivered, the object being to inspire the students with the spirit of enquiry and bring them in contact with the diverse types of spiritual culture and sympathy as reflected in Scriptures and the lives of the Religious Leaders of the world. Religious instruction is imparted once a week to every class and the Principal gives a lecture, once a week, to the general body of the students assembled together in the College Hall. The institution has no endowment for scholarships and prizes; but the Governing Body set apart every year a definite amount for the award of the scholarships and stipends. The College provides scholarships and stipends to the value of about Rs. 150 a month. In the boarding houses attached to the College, there is accommodation for 300 students. The College has a Library, a Gymnasium, a Literary and Debating Society, a Dramatic Society, an Elocution Class, the Freshmen's College Club, the Guru Nanak Club, the Poet's Circle, the Biological Society, a Sanctuary and a Monthly Magazine.

VIII.—Kinnaird College for Women, Lahore.

The Kinnaird High School under its present auspices was established towards the end of the year 1879. In 1886 the first girl from the school and the first in the Punjab passed the Matriculation Examination. In 1901 the Junior Anglo Vernacular training class was formed. The Intermediate College classes were opened in October 1913. At present the students of this class are resident in the school boarding house, and their lecture room is also one of the school class rooms. It is hoped, however, that in the near future a separate building for the College Department will be secured. The object of the institution is to impart to the pupils of the school and specially to the girls of the Christian community of the Punjab a sound

CHAPTER III.—I. — Education and Literacy. — Main educational institutions.

healthy education based on the Christian religion and to send out women of true and sterling character, who will prove efficient workers among their own people. The institution is primarily intended for the benefit of the Christian community, but a number of non-Christians are also admitted.

IX.—Central Training College, Lahore.

The Central Training College was established in 1881, and was for some months accommodated in a building in the Hazúri Bágh. It was then located for a time in the Government College, an old building near the Senate Hall being utilized as a Practising School. It was removed to its present site in 1887. The College buildings have been considerably enlarged and extended, to meet the growing demand for trained teachers in the Province, and to accommodate the double classes consequent upon the introduction of the two years' course for Junior Anglo-Vernacular Teachers. The accommodation is now ample for the requirements of the College,—the class rooms are spacious, and arrangements for the teaching of all the subjects in the curriculum are as complete as possible. The College is equipped with exceedingly well-appointed Physical and Chemical Laboratories (in each of which 40 students can be accommodated at a time) with gas and water laid on. The Science Lecture Theatre accommodates 120 students. There is also a properly fitted Dark Room. A Manual Training Room has been erected at a cost of about Rs 6,000 in which students are taught the principles of woodwork, and simple metal-work, and how to construct simple pieces of apparatus. The College also possesses a fine large room, properly situated and completely equipped, for the teaching of Drawing. There is a lawn adjacent to the College for the students' games. The boarding house attached to the College has accommodation for 200 students, and all are expected to reside therein. A spacious gymnasium 80 ft. by 40 ft., with an abundance of light and ventilation, has been built and equipped in a manner which makes it the best in the Province. A fine covered Swimming Bath, 60 ft. by 30 ft., with a ten-foot verandah all round, has also been constructed for the use of the students.

The Central Training College is under the control of the Director of Public Instruction, Punjab, and is the only Institution in the Province which prepares students (who are nearly all stipendiaries) for all the certificates for Secondary Teachers issued by the Education Department. The classes comprise those preparing for the Senior and Junior Anglo-Vernacular and the Senior Vernacular Certificate Examinations. Drawing and Manual Training are compulsory subjects of instruction. The College takes part in the University Sports' Tournament. Great importance is attached to physical training, games and drill receiving every attention. There is a College Debating Society and an Old Students' Club; the latter has its own Magazine. In April 1903, the College was affiliated to the Punjab University and is the only Institution, at present, which prepares candidates for the Degree of Bachelor of Teaching. Candidates for admission to the B. T. Degree Class are required to have passed the Examination for an Arts or a Science Degree before beginning the course of training. The First Examination for the B. T. Degree was held in April 1905, when all the thirteen candidates sent up from this College passed.

The Central Model School, the Practising School of the College, is provided with handsome buildings, and has a very large Examination Hall, 95 feet by 45 feet. The School teaches up to the Entrance Standard of the

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University, in both the Science and Arts Faculties, and also prepares students for the Clerical and Commercial Certificate of the University. There are over 900 boys on the rolls. The Headmaster is a European and is assisted by a staff of 42 assistants. Under the control of the Principal, and attached to the Central Training College, is the Lahore Normal School with about 104 students, which prepares candidates for teacherships in Primary Schools and for the Junior Vernacular Certificate Examination.

The College is maintained entirely by Government at an annual cost of about Rs 1,00,000, including stipends paid to students. The total number on the rolls is 274.

X.—Medical College, Lahore.

Established 1860, with the obect of providing education in Western Medicine for the people of the Punjab, the College is situated in Anarkali and consists of a main building containing a spacious Library with Lecture Rooms and Museums, a large and handsome Anatomical School capable of accommodating 400 students, with a Lecture Theatre and Museum attached, Physiological and Pathological Laboratories, etc. The Mayo Hospital with its Albert Victor Wing, a detached Ophthalmic Hospital, and a separate block for out-patients is attached to the College for clinical instruction. The Lady Aitchison Hospital for Women, which is in the proximity of the College, is also available for clinical instruction for female students. The cost of erecting these buildings was as follows :—

	Rs.
Medical College main building	1,68,182
Anatomical Rooms	41,000
Pathological Laboratory	1,300
Mayo Hospital	1,82,876
Albert Victor Hospital	1,08,000
Ophthalmic Ward	34,261
Physiological Laboratory	39,599

The College is supported by Government. The cost for 1913-14 was Rs. 1,51,774. It educates students for the Degrees of M. D., M.S., and M.B.B.S., providing a full medical curriculum as required by the General Medical Council of Great Britain. It is under the immediate control of the Punjab Government. Endowed scholarships and prizes are connected with the College The number of students at present on the rolls of the College is 172.

D.—THE AITCHISON COLLEGE.

The Aitchison College, a development of the Wards' School, Ambala, was founded in 1886. Its foundation was due to the efforts of Sir Charles Aitchison, the then Lieutenant-Governor. The general object of the College is to provide an education and training for the Ruling Chiefs and the nobility of the Punjab, on lines similar to those of an English Public School. The Lieutenant-Governor is Patron of the College and President of the Council, which is composed partly of *ex-officio* members, partly of nominated members, including many of the Ruling Chiefs of the Punjab The Council also includes the members of the Committee of Management which is

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presided over by the Financial Commissioner and is composed again partly of *ex-officio* members and partly of non-official members nominated by the council. Subject to the control of the Council, the superintendence of the affairs of the College is vested in the Committee of Management, to which the Principal is directly responsible. The original buildings comprised the main building of the College, three boarding houses capable of containing about 100 boys, and houses for the Governor and the Principal. Many buildings have since been added, the cost being met either from College funds, by subscription or by a gift from a Chief or some member of the nobility interested in the welfare of the College. All these buildings, with the exception of the hospital which hardly fulfils modern requirements, are excellent of their kind. In addition the improvement of the Indian Masters (1912—15) and the installation of the college with electricity (1913) have also been effected at a cost of about Rs. 20,000 paid out of College funds. With the contemplated improvement of the hospital and the erection of a third Assistant Principal's house the College will be provided with all that is necessary so far as buildings are concerned, unless some further expansion in the number of the boys should take place. As a result of the interest which Lord Curzon took in the Chiefs' Colleges of India, the staff of the Aitchison College was re-organised in 1904-05. The office of Governor was abolished and a Principal, combining the offices of the old Governor and Principal, was appointed, with two European Assistants. More recently (1915) a third Assistant Principal has been appointed in view of the increased number of boys at the College, a result of the re-organisation. At the same time (1904-05) the Indian staff was considerably strengthened and the superior Indian posts were, like the European appointments, brought into Government service and made pensionable The system of the control of the boarding houses was at the same time made more efficient, and a more recent change (1915) has put the charge of the boys completely in the hands of educated men. At the same time as the re-organisation of the staff a change was made in the curriculum of the College. A diploma for all Chiefs' Colleges was instituted which is regarded by Government as the equivalent of the entrance examination for the purpose of making appointments and is also accepted by the Punjab University as admitting to the Intermediate examination. The standard however attained by successful candidates is, especially in English and more especially in colloquial English, probably considerably higher than that guaranteed by the Matriculation examination. The other subjects in which a candidate has to pass are (*a*) English, History, Indian History and Geography, (*b*) a vernacular language, (*c*) Persian or Sankrit or science, *d* Law, Political Economy, Revenue and Surveying or Advanced Mathematics, (*e*) Arithmetic. Failure in any one subject disqualifies, even though the candidate has gained the necessary aggregate of marks. The College is yearly inspected by Inspectors, appointed by the Government of India, who also conduct the diploma examination.

A notable feature of the Aitchison College curriculum is that since 1905 religious instruction under competent teachers is given in school hours and regular yearly examinations, conducted by examiners, appointed by the committee, are held. Out-door games are compulsory: they comprise cricket, football, hockey, tennis, riding and tent-pegging and athletic sports. An annual competition is held with the Mayo College, Ajmere, a sister institution. Since the re-organisation of the College the number of boys has gradually

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increased. The average number between the years 1910-15 was 109, including a limited number of day boys, whereas in 1904 there were only 69 boys in the College.

(*e*) Expenditure from every source on public instruction is shown in Table 52. It amounted in 1914-15 to over five and a half lakhs of rupees, distributed as follows, *viz.*, from—

		Rs.
(*i*) Provincial revenues	... ...	1,45,820
(*ii*) District funds	... ...	73,240
(*iii*) Municipal funds	... ...	57,204
(*iv*) Fees	... ...	1,40,032
(*v*) Subscriptions	... ...	42,323
(*vi*) Endowments and other sources	...	1,04,718

Printing Presses.

(*f*) There were 75 printing presses at work in the District in 1915 :—

Serial No.	Name of Press.	Serial No.	Name of Press.	Serial No.	Name of Press.
1	Addison Press.	16	Commercial Printing Works.	31	Jauhri Press.
2	Albert Press.	17	Dipak Rajput Printing Works.	32	Jijnyasu Press.
3	Ahmadia Steam Press.	18	Doaba Educational Press.	33	Jiwan Press.
4	Ahmadia Printing Works.	19	Empire Press.	34	Kashmiri Press.
5	Amrit Press.	*20	Empress Press.	*35	Khadim-ul-Talim, Punjab.
6	Artistic Printing Press.	21	Faiz-i-Am Press.	*36	Khatri Samachar Press.
*7	Arorbans Press.	22	George Mission Printing Press.	37	Khosla Brothers Press.
8	Arya Steam Press.	23	George Steam Press.	38	Kita-at Press.
9	Akal Press.	*24	Gulzar-i-Muhammadi Press.	39	Label Printing Press.
10	Balmokand Press.	25	Hamidia Press.	40	Lahore Machine Press.
11	Bombay Machine Press.	26	Hikmat Press.	41	Law Publishing Press.
12	Brahman Steam Press.	27	Hindustan Steam Press.	42	Light Press.
*13	Caxton Printing Works.	28	Hardinge Printing Press.	43	Mahesh Yantralaya Press.
14	Central Printing Works.	*29	Islamia Steam Press.	*44	Mercantile Press.
*15	"Civil & Military Gazette" Press.	30	Indian Art Printing Works.	*45	Mitra Vilasa Press.

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Printing Presses.

Serial No.	Name of Press	Serial No.	Name of Press.	Serial No.	Name of Press.
46	Mohyal Mitter Press.	*56	Punjab Economical Press.	66	Rifah-i-Am Press.
47	Model Press.	57	Punjab Educational Press.	67	Ripon Press.
*48	Mufid-i-Am Press.	58	Punjab National Steam Press.	68	Sada-i-Hind Press.
49	Muslim Printing Press.	59	Punjab Electric Press.	69	Sewak Steam Press.
50	Mahbub Printing Works.	60	Punjab Printing Works.	70	Star Printing Press.
*51	Newal Kishor Press.	61	Punjab Steam Press.	*71	"Tribune" Press.
52	Observer Press.	62	Popular Printing Press.	72	Union Steam Press.
53	Photo. Litho. Works.	63	Rafiq-ul-Itibba Press.	*73	Victoria Press.
*54	Public Advocate Press.	64	Rahnama-i-Talim Press.	*74	Virjanand Press.
55	Punjab Christian Press.	65	Rajput Printing Works.	75	Washington Press.

The presses marked with an asterisk have been working for 20 years or more.

Out of the total number a little less than two-thirds publish newspapers and advertising sheets; the remaining third or more publish books to some extent, but do mostly miscellaneous and job work.

Newspapers.

The return of newspapers published at the various presses in 1914 shows a total of 166, 43 of which began and 35 ceased issue during the year. The sub-joined tables show (*a*) the languages in which the various papers are written, and (*b*) the intervals of time at which they are published. Many of the important Indian newspapers have both daily and weekly editions :—

(A)

English.	Urdu.	Urdu-Hindi.	Hindi.	Gurmukhi (Panjabi).	Total.
32	108	1	10	15	166

(B)

Yearly ...	... 1	Daily ...	... 19
Half-yearly ...	... 2		
Quarterly ...	... 4	Total	166
Monthly ...	... 77	Started during the year...	43
Fortnightly ...	... 8		
Tri-monthly...	... 1	Ceased to exist during the year	35
Weekly ..	... 51		
Twice a week	... 1	Number of newspapers at the end of 1914 ..	131
Thrice a week	... 2		

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Newspapers.

The 23 newspapers which have a circulation of over 1,500 are noted below :—

With circulation	
Over 3,000.	Over 1,500
Hindustan. Zamindar. Paisa Akhbar. Fauji Akhbar. Himala. Desh. Loyal Gazette. Parkash. Bulletin.	Watan. Tribune Bir Arya Gazette. Sher-i-Punjab. Phul. Akhbar-i-'Am. Civil and Military Gazette. Punjabi. Kashmiri Magazine. Rajput Gazette. Martand Fasana. Chakarvarti.

Of the above the *Civil and Military Gazette* is the only paper published by Europeans. The *Bulletin* publishes chiefly War news. The *Fauji Akhbar* is for the consumption of Indian soldiers, and contains besides general news and notes, topics of military interest. The *Phul* is designed for juvenile readers. The *Martand, Chakarvarti* and *Fasana* are social and moral in tendency, the last, as its name (the Novel) implies, containing translations of novels in other languages and other stories of general public interest. All the remaining papers are more or less actively political, their columns being devoted mainly to the criticism of Government measures and policy ; generally speaking, they are either sectarian or the mouth-pieces of various classes or cliques of the educated community.

Books and registered publications.

During the year 1914, 721 books and 71 periodicals were issued. Of the periodicals 24 were published in English, 34 in Urdu and 13 in Hindi-Sanskrit or Hindi-Urdu bilingual ; 33 treated of Law, 15 of Religion and 23 were of a miscellaneous nature. In the table below the books published are classified according to the language in which they appeared and their

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Books and registered publications.

purpose, whether educational or otherwise :—

Language in which published.	For purposes.		Total.
	Educational.	Other	
Arabic	7	2	9
English	33	43	76
Hindi	6	21	27
Kashmiri	...	3	3
Persian	3	4	7
Punjabi	2	180	182
Sanskrit	3	1	4
Urdu	57	284	341
Bilingual	10	51	61
Trilingual	1	9	10
Polyglot	...	1	1
Total ..	122	599	721

Nearly one-sixth of the output of books was for educational purposes. The main subjects of this literature taken as a whole were languages, Science, History, Religion, Philosophy, Poetry, Fiction, Art, Biography, the Drama, Law, Medicine, and others which do not lend themselves to classification, the educational books naturally falling mainly under the first five heads. Poetry, Religious treatises and Fiction, in the order named, are easily the most popular among the books issued for the consumption of the general public.

Section J.—Medical.

Staff and organisation.

The medical staff at head-quarters consists of the Civil Surgeon with two sub-assistants, one of the Assistant Surgeon and the other of the Sub-Assistant Surgeon class. There is also a Sub-Assistant Surgeon attached to the Police Hospital. The Railway staff at head-quarters consists of the Civil Surgeon, who is Medical

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Officer of the Railway, two Military Assistant Surgeons and two Sub-Assistant Surgeons, one of whom is temporary.

Staff and organization.

In the district each dispensary has a Sub-Assistant Surgeon in charge with the exception of Kasúr, where an Assistant Surgeon is posted.

Medical institutions.

The medical institutions in the charge of the Civil Surgeon (which do not include the Mayo Hospital) are :—

(a) at *Head-quarters* :—

(1) The Civil Dispensary.

(2) Municipal Dispensaries as follows, *viz.*,—

(a) Mozang, which has separate arrangements for treating females and has a female Sub-Assistant Surgeon attached in addition to the Sub-Assistant Surgeon.

(b) Hira Mandi (Lahore City Branch).

(c) Kashmiri Bázár Dispensary opened in 1913, which is for females only and has a female Sub-Assistant Surgeon in charge.

(3) The Police Hospital, with 44 beds.

(4) Three Railway Dispensaries, all out-door.

(b) *Rural Dispensaries,* situated at various places in the district as follows, *viz.*—

—	Dispensary.	In-door or Out-door.	Beds.
District and Municipal.	1 Kasúr ...	Both ...	36
	2. Chúnián ...	Do. ...	10
	3. Khudián ...	Do. ...	8
	4. Patti ...	Do. ...	6
	5. Khalra ...	Do. ...	3
	6. Pattoki ...	Do. ...	1
	7. Sháhdara .	Out-door ...	*Nil.*
	8. Ali Raza Abad ...	Do. ...	*Nil.*
Canal ...	1 Bedián ...	Outdoor ...	*Nil.*
	2. Najábat ...	Do. ...	*Nil.*
	3 Balloki ...	Both ...	8

Three Mission Dispensaries are aided, *viz.*, one in the City (in the Lande Bazar), one at the Clarkabad and one at Wágah.

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In and out-patients treated and operations.

The total number of patients treated in 1913 at these institutions were:

—	Number.	Daily average.
Out-door...	172,415	472·35
In-door	2,109	5·78

Detailed statistics are given in Table 53 of B Volume. The total number of operations for the same year was 12,259, of which 401 were classed as "selected."

Income and expenditure.

The total income and expenditure for the dispensaries in charge of the Civil Surgeon as well as for the Mayo Hospital amounted respectively to Rs. 1,44,863 and Rs. 1,39,827. The main sources of income were Government contributions Rs. 88,611, Local Fund contributions Rs. 12,336, Municipal Fund contributions Rs. 21,454, subscriptions Rs. 2,786 and Miscellaneous Rs. 10,630.

The Mayo and Albert Victor Hospitals.

With the exception of the private and female wards of the Albert Victor Hospital, both the Mayo and Albert Victor Hospitals are associated with the Lahore Medical College for clinical instruction. The Mayo and Albert Victor Hospitals, as extended under the King Edward Memorial Scheme, accommodate 410 patients, the beds being made up as follows :—

MAYO HOSPITAL.											ALBERT VICTOR HOSPITAL.			GRAND TOTAL.
Main Block.		*Madan Gopal Wards.*		*Opthalmic Wards.*		*Tuberculosis Wards.*		Isolation Wards	Indian Family Wards.	Indian Private Wards.	General Wards.	Isolation Wards.	Private Wards.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
164	42	28	12	48	24	12	8	4	12	12	36	4	4	410

The Visiting staff consists of a First and Second Physician, a First and Second Surgeon, a Gynæcological Surgeon, and an Opthalmic Surgeon, all of whom are Professors of the Lahore Medical College. The Resident staff includes five House

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The Mayo and Albert Victor Hospitals.

Surgeons (three of whom are Civil, and two Military, Assistant Surgeons), two House Physicians, both of whom are Civil Assistant Surgeons, and a Nursing Superintendent of the Nursing staff. During the year 1914, 4,944 in, and 30,752 out, patients were treated, and 826 major and 3,667 minor operations performed.

The hospitals are mainly supported by Government; the income from all other sources including donations from local bodies, and the North-Western Railway, interest on investments, students' fees and private subscriptions, amounted in 1914 to Rs. 15,800 round. The total expenditure for the same year was over Rs. 1,02,000.

The Lady Aitchison Hospital.

The Hospital (founded in 1885 and opened in 1888 by Lady Dufferin) combined up to 1910 the functions both of a Hospital and of a School in connection with the Medical College, Lahore, where women should receive a thorough medical training. Since 1910 the classes for Clinical Lectures and Demonstrations have been transferred to the Medical School for Women at Ludhiana, though European, Eurasian and Indian Women are trained in Nursing and as Midwives. The management of the Hospital is in the hands of Executive Committee of the Lady Aitchison Hospital Association, Lahore, consisting of 4 *ex-officio*, 5 nominated and 5 elected members. The dispensary buildings consist of two common wards, one for Hindus and one for Muhammadans, and 4 private family wards with a total accommodation of 40 beds. The staff consists entirely of ladies, and includes a Physician-in-charge, House Surgeon, Matron and House-keeper. The patients treated in 1914 amounted to 5,536 out-door, with a daily average of 49·98; and 800 in-door with a daily average of 32·50. The total operations for the year numbered 431 and selected operations 126. The total income for the year 1914 was Rs. 37,478, of which Rs. 16,249 was derived from grants-in-aid, and the total expenditure was Rs. 33,818.

The Lahore Lunatic Asylum.

The present Lunatic Asylum, situated on the Jail Road, between the Lahore District and Female Jails, is the premier of the class of new Central Asylums established in India in the last 15 years. On its completion in 1900 the inmates of the old institution at Naulakha and of the Delhi Asylum were removed to it and patients now come from all parts of the Province.

The Asylum buildings proper are in two distinct parts, one for females and one for males. The maximum accommodation is 832 (males 666 and females 166), but the largest number so far housed was 758, so there is still ample room available. Both

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The Lahore Lunatic Asylum—Accommodation.

Health.

parts of the Asylum afford separate accommodation for European and Indian paying patients, and each has its own hospital, dispensary and quarantine buildings. Ordinary patients are housed in either the sleeping barrack or cubicular system in both parts of the Asylum. Male patients are divided into seven sections :—(*i*) criminals ; (*ii*) "miscellaneous" in which are kept dangerous non-criminals and those dangerous and boisterous inmates who have recovered or are in the stage of recovery ; (*iii*) the old hospital section, which is reserved for quiet and well-behaved patients ; (*iv*) the "tractable" for dements and harmless units ; (*v*) the tubercle ; (*vi*) the Hospital ; and (*vii*) the quarantine. The institution, which was inaugurated under the direction of an alienist of rare experience, the late Lieutenant-Colonel Evens, I M.S., has more than realised the expectations of Government. Its popularity is shown by the ever-increasing number of its inmates and the fact that patients from distant quarters of Northern India are brought here for treatment. The rooms and barracks are of an excellent hygienic standard and are comfortable and cool, and the gain from the transfer from the overcrowded and unhealthy site at Naulakha to the present fine open one with drainage into the Southern Branch of the Lahore Cantonment Storm Water Channel has been immense. The largest percentage of the cases treated belong to some division of maniacal excitement and form nearly one-third of the total number. Next in frequency come cases of Melancholia. Various forms of Dementia, such as Katatonia and Precocious Dementia, account for 14 per cent. of the admissions. Hemp-drug cases on the other hand provide for only 12 per cent. of the total number under treatment ; in the light of further experience *ganja*, *bhang* and *charas* have not been found to be such a fruitful source of causation of insanity as was formerly supposed to be the case. The staff of the asylum consists of a Superintendent, who is a specially selected member of the Indian Medical Services, with a Deputy Superintendent and Assistant Deputy Superintendent, both of the Military Assistant Surgeon class, the former responsible under the Superintendent for discipline and general management, and the latter aided by a Sub-Assistant Surgeon for the Hospital. For the female part of the Asylum there is a Matron with a staff of four Nurses : the nurses are all Nuns of the Franciscan Order, and their devotion and self-sacrifice has done a great deal to ameliorate the condition of the inmates and has given a vastly improved tone to the character and working of the Indian staff. The Asylum has a large farm on which are employed from 80 to 100 inmates daily. This farm avocation appeals to many and is indeed the

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most healthy and profitable that can be provided. All the vegetables required are provided from this farm and all fodder for the asylum cattle in like manner. In addition a large number are engaged in weaving the entire asylum clothing (being manufactured from raw material purchased in the market), and mat-making; cooking and the general sanitary arrangements of the institution are almost entirely in the hands of the inmates. The general attendant staff numbers 111 (95 males and 16 females), with one European and two superior Indian warders. The average expenditure on the entire asylum, including numerous new works executed in the past five years, is Rs. 1,16,500, giving a cost of maintenance of Rs. 144 per head.

Expenditure and cost of maintenance.

Vaccination.

(*c*) Vaccination is compulsory in Lahore City and Cantonments only. Statistics will be found in Table 54 of the B Volume. The establishment in the City under the Health Officer consists of a Superintendent of Vaccination and four Vaccinators, and in the District under the Civil Surgeon, of a Superintendent and seven Vaccinators. The total expenditure on vaccination in 1913 was Rs. 4,123-9-8. The average cost for each successful vaccination was Re. 0-1-11. The percentage of population protected is 34·97. In 1913, 38,005 vaccinations were done, of which 36,073 were primary. There has been a considerable decrease in the number vaccinated, chiefly under re-vaccination.

Village sanitation.

(*d*) Little has been done in the direction of Village Sanitation owing to the apathy of the people and this condition will remain till the people realize the value of sanitation and co-operate with Government. Quinine is sold by Post Masters and is distributed by *Zaildars*, etc., but the demand is small.

CHAPTER IV.—PLACES OF INTEREST.

The archæology of Lahore has been dealt with in Chapter I-B. In this chapter will be given an account of the places of general interest, and a more detailed description of the antiquarian monuments of the district.

Lahore.

(*a*) For European and Native alike Lahore itself is the place of most interest in the district. The present city of Lahore, with the cantonment, embraces portions of no less than 12 revenue estates, and has an area of 29 square miles, the largest for any city in the province, with a population of 228,687.

The native city covers an area of about one square mile. It was formerly surrounded by a brick wall, rising to a height of 30 feet and strengthened by a moat and other defences. But the moat has been filled in and the wall razed, and a garden now occupies the site of the trench and wall, encircling the city on every side except the north. Though situated in an alluvial plain, the present town stands high on the débris of ages. A metalled road runs round the outer side of the rampart, and gives access to the city by thirteen* gates. The citadel or fort rises upon a slight but commanding eminence at the north-eastern angle, and abuts northward on the old river bed. Within the city, narrow and tortuous streets and lanes, some of them ending in *culs-de-sac* and lined by tall houses, give Lahore a mean and gloomy appearance; but the magnificent buildings of the Mughal period serve to relieve the dullness of its domestic architecture, and many of the houses are adorned with beautiful wood-carving. On the north eastern side especially, the mosque of Aurangzeb, with its plain white marble domes and simple minarets, the mausoleum of Ranjít Singh, with its rounded roof and projecting balconies, and the decorated facade of the Mughal palace, stand side by side in front of an open grassy plain, now the Minto Park, exhibiting a grand *coup d' oeil*. The European residential portion of Lahore lies to the east and south of the City; it includes not only the old revenue estate of Lahore, of which Anárkali is part, but portions of Mozang, Kila Gujar Singh, Naulakha, Garhi Sháhu and Achint Garh. The old village sites of Mozang and Kila Gujar Singh interpose solid wedges between the more open spaces which have since been adapted to building and residential purposes. Anárkali lies immediately to the south of the

*Note.—The gates, starting from the east of the Fort and working round by the south-west and north are named as follows, *viz.*, *Raushni*, *Masti*, *Kashmíri*, *Khizri*, *Yakki*, *Delhi*, *Akbari*, *Mochi*, *Shahálmi*, *Lohári*, *Mori*, *Bháti*, and *Taksali*.

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Lahore.

city and originally contained a cantonment, abandoned in 1851-52 on account of its unhealthiness. In 1849 the environs of Lahore still were a mere expanse of crumbling ruins and the houses of the first European residents clustered around the old cantonment on a strip of alluvial lowland, south of the town running parallel to a former bed of the Rávi. Gradually, however, the station spread eastward and a new town covered a larger part of the area once given over to ruins and jungle, while every year sees fresh additions. Anárkali is connected with the city by the Old Mall and contains the Secretariat buildings, the *Gol Bágh* a public garden owned by Government and managed by the Municipality, District Court-house, the new Veterinary College, the new Accountant-General's office and the new Public Works Department Secretariat, Government College, Punjab University, Senate Hall, the new University Hall, Town Hall, Museum, Mayo School of Art, the Punjab Public Library converted from an old Mughal pavilion, the Mayo and Lady Aitchison Hospitals and King Edward Memorial Buildings, the Volunteer Club and many other public buildings. At the south of the Old Mall stands the Chauburji, which formed the gateway of the garden of Zeb-un-nissa, the accomplished daughter of Aurangzeb. To the east is the railway colony, grouped about the station in the quarter known as the Naulakha and Mughalpur (Achintgarh). It contains the railway offices, the carriage shops and engine yard, a theatre, and well-laid out grounds. On the Durand Road, in the suburb of Killa Gujar Singh, are the new Queen Mary's College and Convent buildings. In the extreme south-east the Upper Mall stretches out for a distance of 3 miles to Government House (once the tomb of Muhammad Kasim Khan, a cousin on the mother's side of the Emperor Akbar, and afterwards the residence of Khushal Singh, uncle of Tej Singh, the Sikh General), the Lawrence and Montgomery Halls and the new Punjab Club. This road is the main thoroughfare of the newer residential quarter; and on or near it are situated the Cathedrals and Orphanages and the Chief Court, besides sundry Government Offices, most of the European shops and the Victoria Memorial and John Lawrence statue. In the large public garden, surrounding the Lawrence and Montgomery Halls, is the "Zoo." started in 1883 to which, with the help of a handsome grant from Government and of increased contributions from the various local bodies of the Lahore Division, important alterations and improvements undertaken at the suggestion of an expert are now in progress. The Lawrence Hall was built as a memorial of Sir John Lawrence, chiefly by the contributions of the European community in 1861-62, and the Montgomery Hall in honour of Sir

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Robert Montgomery in 1866 by contributions from Native Chiefs; the two buildings, which form a connected whole, have been recently enlarged and improved. Beyond the Punjab Club on the way to Lahore Cantonment is the Aitchison Chiefs College. At the boundary between the estates of Mozang and Ichhra, near the point where the Jail Road crosses the canal, are the Observatory, the Borstal and District Jails, the Race Course and the Lunatic Asylum.

Some of the old buildings in Anárkali have played many parts. The Civil Secretariat proper, erected in 1845, to which the other buildings adjoining it, including those that once housed the Chief Court, are later additions, was first the Residency. Anárkali's tomb, which is now a record room, was once the Station Church. The old Public Works Department Secretariat, near the Senate Hall, erected in 1854, was formerly a barrack. What is now the Legal Remembrancer's office was the tomb of Shah Chirágh and once served as the Accountant-General's office.

The improvements wrought within recent years in the appearance of the Civil Station are very striking and comprise the lighting by electricity of the main roads, their provision with pavements, and grass margins and the construction of a tan ride from the Post Office to the Canal Bridge. With the completion of the schemes of the King Edward Memorial in Anárkali and of the new Secretariat Buildings and Masonic Hall at Charing Cross, a very notable addition will be made to the commanding public buildings of the station. The King Edward Memorial scheme, opened by His Excellency Lord Hardinge on the 10th December 1915, has been referred to elsewhere. Here it will suffice to say that twelve imposing buildings are involved and that the roads abutting on the side have been revised and laid out in such a way as to bear a coherent relation to the new road alignments, to the neighbouring buildings and to each other. The important new scheme for the Civil Secretariat, estimated to cost Rs. 11½ lakhs, aims at collecting in one place the various public offices now scattered about Lahore and providing a dignified setting for the Victoria Memorial with the main roads focussed more directly upon it. Preliminary work estimated to cost Rs. 25,000, comprising the making of roads and water-courses and the planting of trees, has been begun on the site selected by Government at the corner between the Mall Road to Lahore Cantonments and the Lahore branch of the Upper Bári Doáb Canal (north of the canal), for the construction of residences for officers of Government; some 55 compounds and dwellings are to be provided at

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varying rentals. The old parade ground between the Fort and the *Chota* Rávi, which is most conveniently situated for the City and all its Schools, has since 1914 been devoted, in commemoration of the visit of Lord Minto to Lahore during the period of his Viceroyalty, to the purposes of a peoples' park: the five giant masts of the wireless electrical installation in the Fort zone within the same area are now a prominent feature of the landscape.

The Lahore Museum (Victoria Jubilee Institute, Punjab.)

(*b*) The institute was built from a fund raised throughout the province as a permanent memorial of the Jubilee of Her Majesty the Queen Empress celebrated in February 1887. The object was to provide a Provincial Institution containing a museum, library and lecture rooms with a sufficient instructional staff and capable in connection with the School of Art of gradual expansion into a Technical College. The foundation stone was laid by the late Prince Albert Victor, Duke of Clarence and Avondale, on February 3rd, 1890, and the building was completed in 1893. At the end of that year the institute was utilised for the Punjab Exhibition opened in December 1893.

The building together with the Lecture Hall, which is used for educational lectures and exhibitions, and the Mayo School of Art forms a handsome block in late Mughal style situated next to the market and opposite the University Senate Hall. The general plan of the building resembles a letter E with the entrance porch in the centre of the back face. The centre gallery is devoted first to a few fine specimens of carved Mughal doorways and woodwork and secondly to a fairly representative collection of Indian paintings dating from the Indo-Persian, Mughal, Sikh and Kángra schools up to a few examples of Modern Indian paintings of the new Calcutta School; the cataloguing and arranging of this collection is now complete. The south wall of the gallery has been decorated in Persian, style by the students and teachers of the Mayo School of Art from designs by the present Vice-Principal, M. Sher Muhammad, who also designed the whole of the wood and plaster work seen in the building. Two galleries run east and west of the centre gallery, that on the west being devoted to models, raw products, etc., and that on the east to Art Industries of all kinds amongst which may be noted fine collections of musical instruments, *huqas*, jewellery, textiles, pottery, and a small collection of armour. At the end of the east gallery is the gallery running parallel to the centre containing the famous collection of Græco-Bactrian Gandhara Sculptures; this collection is now being catalogued by the Superintendent of Hindu and Buddhist Monuments, Northern

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The Lahore Museum (Victoria Jubilee Institute, Punjab).

Circle, who has already written a handbook entitled the "Buddha Story in stone," which is issued by the Museum. Parallel to the sculpture gallery is a smaller gallery in which are shown some interesting small collections of Tibetan painted banners, statuettes, carved curios, Nepalese brass work, and a case of manuscripts. In this room too is a case containing the recent finds of gold and silver oranments and *objets d'art* from Taxila and loaned to the Museum by the Director-General of Archæology in India. The Museum has been extended this year by the addition of one large gallery, a library, office and record room, opening out of the centre gallery at the back. This gallery will be shortly filled by Sir Aurel Stein's latest finds from Central Asia. The entire building is lighted from the north and is of lofty dimensions which assures a pleasant temperature and restfulness to the eyes. The main collections, which make the Museum one of the most representative and interesting of Provincial Museums, are Archæology, Art, Industries, and Coins. The Museum is most popular; the average yearly visitors number 400,000, one day a week, Wednesday, being reserved for students and others wishing to study the collections in peace and quietness. The entire area now measures about 35,582 square feet. The old Central Museum, which this building was designed to replace, was erected in 1864 for the temporary purposes of a provincial exhibition, and was altogether unsuited for the use it was for so long put to. It has been purchased by the Lahore Municipality and turned into a market and the contents transferred to the new building. These contents may be briefly described as Greek, Bactrian, Buddhist, Jain, Brahminical, Sikh and Muhammadan remains and monuments, the modern artistic and manufacturing industries, the agricultural, mineral, and forest products, the natural history and ethnology of the Punjab and its borders. At present in front of the entrance to this building there stand on raised platforms two old sikh canons, while the famous gun *Zamzamah*, known by the Sikhs as the *Bhangián-wáli Top*, is placed in front of the Senate Hall on the opposite side of the road. This gun is one of the largest specimens of native casting in India, and was made in A. D. 1761 by Shah Wali Khán, Wazír of Ahmad Shah Duráni, by whom it was used at the battle of Pánípat. After the departure of Ahmad Shah the gun was left in the possession of the Sikh Sardárs of the *Bhangi Misl* (whence its name, *Bhangián wáli Top*) and came to be regarded by them as a talisman of supremacy. Ranjít Singh eventually possessed himself of it and it was employed by him at the siege of Multán in A. D. 1818. From that date until removed in 1860 it was placed at the Delhi Gate of the city of Lahore: it is still regarded by

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The Lahore Museum (Victoria Jubilee Institute, Punjab).

many as an incarnation of Mahádeo. The inscription on the gun opens as follows :—

By order of the Emperor (Ahmad Shah) Dur-i-Duran Shah Wali Khan the Wazir made this gun named Zamzamah, the taker of strongholds.

The work of Shah Nazar.

Then follow a number of verses, the translation of which will be found at pages 60-61 of Dr. Thornton's Guide Book. The last lines give the date of the gun as 1174 A. H. or 1761 A. D.

Railway Settlement.

(c) Lahore being the head-quarters of the North-Western Railway Administration, which system now comprises nearly 5,500 miles of lines, exclusive of sidings, there is a very large Railway staff at Lahore, which forms a very important part of the population of the town. The Railway Colony was until recent years entirely grouped round the Railway Station where a considerable area, sometimes known as the Naulakha settlement, is occupied by Railway quarters ; in consequence, however, of the large development of the North-Western Railway system, it was found some years ago that the settlement was insufficient, and a very large area, about a thousand acres in extent, was acquired in 1916 to the east between the Shalámár Road and the main railway line through Amritsar to Delhi. On this area entirely new Loco. Shops and Carriage and Wagon Shops have already been built, the Railway having outgrown the old shops at the station ; the Carriage and Wagon Shops were built first and opened in 1910, and the new Loco. Shops were started in 1910 and are now practically completed, the Locomotive Department having moved into them in 1914. Very large numbers of employés work in these shops—roughly speaking 5,000 in the Loco. Shops and 5,000 in the Carriage and Wagon Shops, while the new Printing Press, which has also been built at Moghalpura, employs about a thousand more. For such a large Railway system it will easily be understood that very large quantities of stores of all kinds have to be kept in stock, and the old stores buildings close to the Lahore Station have for many years proved quite inadequate A new general stores yard is, therefore, now being constructed near the new Loco. Shops and will probably be brought into use within a few months. Lahore station, being an important junction for Amritsar and Ambala to the east, for Bhatinda and Delhi also to the east, for Multán and

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Karáchi to the south, for Lyallpur through Sángla Hill to the west, and for Ráwalpindi and Pesháwar in the north-west, deals with an immense traffic and a large scheme of alterations, both to the station building and the yard itself, is now being proceeded with as fast as funds will permit.

The European population of the Railway Colony consists of 11 or 12 hundred people, of whom about 900 are housed in the old Naulakha settlement and the remainder in the new colony at Moghalpura which may be expected to increase considerably in the future. A new feature in the Naulakha settlement is a large Institute for entertainments and recreation, constructed and opened early in 1913, not far from the Railway station, consisting of a large theatre with reading rooms, billiard room, etc., and a fine field for games for the use of the resident European staff; another commodious Institute of less imposing design has been provided on the bank of the Bári Doáb Canal at Moghalpura for the staff there.

The Indian population of the Railway Colony is naturally very large also, though a large majority of the workmen in the shops live in the city and come to their work daily. There is also a pavilion and large field for games provided at Naulakha for the Indian employees and a scheme is under contemplation for adding a theatre and billiard room to the pavilion.

Lahore Cantonment.

(*d*) The Cantonments are situated 3 miles east of the Civil Station of Lahore and are the head-quarters of the third Lahore Division of the Northern Command. There are two Railway Stations: Lahore Cantonments East on the branch of the North-Western Railway to Delhi, and Lahore Cantonment West on the branch to Multán. Till 1906 the cantonment was called Mián Mír. The troops were moved here from the Anárkali quarter of Lahore in 1851-52 on account of the unhealthiness of the latter. The Cantonment stands on an open and arid plain, originally bare of trees; canal irrigation was cut off in the residential area during 1905-06 in an attempt to improve the health of the station, but as the water-supply has been found to be defective it is now being reintroduced. The site is said to have been at one time named Haslímpur. Prince Dára Shikoh, brother of Aurangzeb, who was put to death by that emperor on his ascending the throne, was a disciple of a famous Muhammadan saint or *pír*, Mullan Sháh, known as Mián Mír. He purchased the village of Haslímpur, and bestowed it on his religious preceptor, after whom it was renamed. The mausoleum of the holy man is a handsome domed building of white marble and red Agra sandstone, with a mosque in the

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Lahore Cantonment.

courtyard. The income and the expenditure from cantonment funds during the ten years ending 1914-15 averaged Rs. 70,653 and Rs. 71,651, respectively. The Punjab Banking Company has a branch here.

Shâhdara.

(e) The town of Shahdara (population 5,426) is situated on the right bank of the Rávi, 4 miles from Lahore. Now that the town is connected with Lahore by a road bridge, its commercial development should be rapid. There are at present 2 registered factories, including the Lahore Spinning and Weaving Mills, which is the largest private factory in the district. The place is famous for the tomb of Jahángír, built by his widow Núr Jahán, and for the gardens surrounding it.

Kasúr.

(f) Kasúr is the most important town in the district after Lahore. It is built upon the high bank, which marks the termination of the Mánjha and looks down upon the lowlands of the Sutlej Hithár. It stands just to the side of the Grand Trunk Road to Ferozepore, 34 miles south of Lahore, and 16 north of Ferozepore. The town is an aggregation of fortified hamlets called *kots*, small in themselves but together forming a considerable run. Their names are: Kot Khwája Hussain; Kila Pukhta; Kot Ghulám Muhi-ud-Dín; Kot Murád Khán; Kot Usmán Khán; Kot Badar-ud-Dín Khán; Kot Bákar-ud-Dín Khán; Kot Azam Khán; Kot Hákim Khán; Kot Fateh Dín Khán; Pírán ká Kot; and Kot Abdul Ghani Khán. About a mile to the east of the town, situated on the other side of the Trunk Road and quite close to it, are the *tahsíl* and Police Station buildings. Here also is the Court-house of the Assistant Commissioner in charge of the sub-division. The history of Kasúr is given in Chapter I.-B. Since 1807 the town has declined in importance, but the extension of the railway to Ferozepore, Amritsar and Lodhrán has made it the centre of a very brisk trade in grain and cotton. There are several cotton gins working in the town. The only considerable manufacture is of country harness, shoes and other leather goods for which Kasúr has a considerable reputation. There is also a school of industrial art.

Chúnián.

(g) Chúnián is a small town with a population of 7,151 inhabitants, situated like Kasúr upon the high bank of the old bed of the Beás, on the road from Ferozepore to Multán, distant 38 miles from Lahore and 10 miles from the Chhánga Mángá Railway Station on the Lahore and Multán Railway. The town was formerly divided into three separate fortified hamlets, one of which is now entirely in ruins while the other

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Chúnián.

two have completely coalesced. It suffers from its position off the Railway, all exports being now despatched from the stations of Kot Rádha Kishan and Pattoke. There are four registered factories, all of which gin or bale cotton either singly or in combination with some other industry. At present its only importance is derived from its being the head-quarters of the *tahsíl* and a point through which traffic passes on its way to the Railway. There is a rest-house, the property of the District Board.

Khudián.

(*h*) The town of Khudián (population 2,992), is situated about 16 miles east of Chúnián, close to the border of the Kasúr and Chúnián *tahsils*, just to one side of the Multán and Ferozepore road, and is a station on the Amritsar-Patti-Lodhrán Line. It is an old town surrounded by a brick wall; many of the houses are large and well built. In the neighbourhood is the remnant of an old mud fort now in ruins. There is a *mandi*, but it deals with very little trade, much of the produce of the Hithár still going by road to Kasúr. Most of the inhabitants are agricultural, cultivating the lands attached to the estate; there are however a fair number of money-lenders and petty shop-keepers in the *bazar*. There is a Police Station, and there are two rest-houses, one belonging to the Police and the other to the Irrigation Department.

Patti.

(*i*) Patti (population 7,987,) is a very old town situate 38 miles south-east of Lahore and 28 miles east of Kasúr. It stands on the road to Harike Ferry, which used to be an important line of communication between the Lahore and Ferozepore Districts and has a station on the new line from Amritsar to Lodhrán. The town is walled and the houses are built to a large extent with brick masonry. It has a good *bazar* with a paved street and private *mandi* which has been built by a leading Moghal family resident there and not only draws local produce but also takes the bulk of the export trade of the rich adjoining tracts in the Amritsar District. About 200 yards from the town on the north-east is an old masonry built fort, which under the Sikh rule was used by Mahárája Ranjít Singh as a horse-breeding establishment, and now contains the Police station. There is a rest-house, the property of the Irrigation Department.

Khem Karn.

(*j*) Khem Karan (population 5,732) is a small walled town in the Mánjha tract of Kasúr *tahsíl*, distant 7 miles from Kasúr with which it is connected by a metalled road. Being the Railway Station next to Kasûr, the place has declined somewhat from its old position as a half-way house for road trade.

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(*k*) In the following paragraphs is given a more detailed description of some of the chief buildings of antiquarian interest in or near Lahore :—

Antiquarian monuments of Lahore and neighbourhood.

I.—The Fort and Palace.

The frontage of the fort and palace extends on the north side of the city overlooking the Ravi towards Shahdara from east to west for about 500 feet. It was the work of four Emperors. To the extreme east are the foundations of the Akbari Mahal, or palace of Akbar ; next comes a portion ascribed to Jahángír, flanked by two towers like abutments ; and, lastly, a curtain wall between two hexagonal towers of unequal size is said to have been built by Sháhjahân, with additions by Aurangzeb and the Sikhs. The greater part of the frontage is covered with designs in inlaid enamelled tiles, including, in defiance of Muhammadan orthodoxy, the figures of men, horses, and elephants engaged chiefly in sporting, and symbolical representations of zodiacal signs and of the angels who, according to old Persian mythology, preside over each day and each month of the year. In the spandrels over the arcaded compartments in front of Jahángír's Palace are four representations of the rising sun. Other spandrels show winged cherubs, resembling those of Christian art. The general scheme of the wall decoration is simple, and resembles that of many Italian fronts, consisting of a series of arcaded panelling of flat projection, broken by horizontal bands of mixed enamelled and carved fretwork of geometrical design, the spandrels and some of the panels filled in with porcelain work, but most of the latter left in bare plaster, while some have been painted with fruits, flowers, &c., in fresco. Besides the symbols noticed, which may be faint echo of the ancient mithraic worship of the East, there is great variety of subjects comprising birds, processions of loaded camels, demons with duly cloven hoofs, conjurors, dancing girls, dragons, horsemen, and some beautiful pieces of geometrical ornament.

Arz Begi

Rising about half way up the palace front there is in this enclosure a ruined building on arches immediately beneath a marble pavilion with perforated lattice work. This was the *Arz Begi,* where the *Omra* or nobles of the court assembled in the morning to receive the emperor's commands.

Hathi Pol Gateway.

Returning to the Fort entrance and then to the left the visitor passes under a second gateway of marble, called the *Hathi Pol* : the approach to the harem formerly lay to the left, up a staircase of broad steps, now destroyed. Over the gateway is a Persian inscription dated 1041 Hij, of which the following is a translated extract :—"The King (Sháhjahán) ordered a tower to be erected which in height should be beyond measurement and conception, like unto the highest Heaven. In beauty, loftiness, and excellence such a tower never has been and never will be seen under the sky." The road to the right by which the Fort is now reached is English work.

Díwán-i-Ám.

In the centre is the *Takht,* or Throne-room of Sháhjahán, the red sandstone railing surrounding which is the only existing example of its kind. In this *Díwán-i-Ám,* or Hall of Audience, the Emperor daily sat in State ; and as he took his seat the musicians stationed in the *naqár kháná* opposite struck up a martial strain, while a glittering pageant of men, horses and elephants, graphically described by Bernier, passed in review before him ; but meanwhile there issued from an empty tomb immediately in front, which has now disappeared, the voice of a *mulla* reminding the Sháh-an-Sháh from time to time

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Díwán-i-Ám

that he too must die like other men. The daily procession, according to Bernier, lasted from upwards of an hour, but, notwithstanding the time wasted on these displays, a large amount of business was got through, and the Emperor, with all his love of show and splendour, never remitted his vigilance over the internal Government. Of Aurangzeb, indeed, it is said that "the appointment of the lowest revenue officer of a district or the selection of a clerk in an office was not beneath his attention, while he planned each campaign, issued instructions during its progress, fixed on points of attack, and regulated the movements of very detachment or convoy." The work of Akbar, at the extreme east of the Fort, has disappeared; the quadrangle of Jahángír however can be traced. It is remarkable for the Hindu character of the details especially of the red stone consoles supporting the eaves which are in the form of elephants and other conventional animals, precisely similar to those to be found in Hindu temples.

The *Khwábgáh.*

The *Khawábgáh* of Sháhjahán is an elegant little pavilion of marble arches and open lattice work immediately over the *Arz Begi* already noticed. In this pavilion, protected by curtains hanging from rings in the walls, the Emperor slept, and on rising showed himself at the marble windows to the nobles gathered below. Like the rest of the buildings in the Fort this has been made to serve a British purpose, and at one time did duty as a garrison church, but all vestiges of the church have been removed and the building restored to its original form. The upper frieze is an inlay of cornelian, &c., and gracefully designed.

The *Moti Masjid.*

Returning westward through the barracks, and passing the *Takht* the visitor sees an archway which is the entrance to the *Moti Masjid*, a small mosque with marble domes, half hidden by surrounding walls which was formerly the private chapel of the ladies of the imperial harem. Between this and the *Takht* is a building, now transformed into a hospital or sleeping quarters, without any distinctively oriental character. This was a *hammám* or suite of bathing-rooms, and it was also used as a cabinet council chamber.

The *Samman Burj.*

The stern necessities of English military life had no reverence for the relics of departed greatness, and there is only one part of the Fort and Palace which has not been put to some practical modern use. This is the *Samman Burj*. *Saman* is an abbreviation of the Arabic word *musamman*, octagonal. It is by no means certain that the building which, turning to the left, after passing the *Moti Masjid*, the visitor has now entered is that to which the name was originally applied. Report says that there was another lofty tower, detached from the main building which was so called; and unless the language of the inscription on the *Háthi-pol* gateway is ordinately hyperbolical, it seems to point to some such conclusion. But although the *Samman Burj* does not merit the extravagant eulogy of the inscription, an examination of its parts will he found interesting. There is a small, though costly, marble pavilion, inlaid with flowers, wrought in precious stones, and known by the significant name of *Naulakha*, or the building which cost nine lakhs. This delicate and beautiful work belongs to the time of Aurangzeb, and it is distinguished from other architectural forms near it by the curvilinear roof. The inlay, much of which has unfortunately been destroyed, is remarkable for excessive minuteness and finish of execution. In this, as in the later work of most styles of art, conventionality was beginning to usurp the place of originality and purity of design Still as a specimen of later Mughal work, this little pavilion is full of interest.

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The *Shísh Mahal.*

The *Shísh Mahal*, or Palace of Mirrors, is a much more striking object and the iridescent sheen of its myriad fragments of looking-glass of different colours set in arabesque patterns of white cement, at once attracts the visitor's attention. This is the work of both Sháhjahán and Aurangzeb, and the more gaudy and vulgar portions are due to the Sikhs. It is historically interesting as the scene of the formal transfer of the sovereignty of the Punjab to the British Government. There too Ranjít Singh held receptions, and from the lofty vantage point of the upper tower could survey at ease the movements of his troops on the plain below, the stores in his arsenal in the court of the Jáma Masjid, and the varied bustle and life of the Fort and city. The effect of the *shísh* or mirror work, though brilliant, narrowly escapes the charge of vulgarity, especially when contrasted with the marble inlay of the Naulakha and of the spandrels of the marble arches on the inner side of the *Shísh Mahal* itself. In the small rooms leading to the upper tower are fair specimens of the wooden ceilings made in geometrical patterns, gaily painted and guilt, which produce a remarkable effect of intricacy and richness. The principle on which these elaborately panelled ceilings are constructed is identical with that adopted in similar work at Cairo and elsewhere. From these chambers the visitor should proceed to the roof of the building and ascend to the summit of the small chamber erected thereon, as from this point the finest view of Lahore and the surrounding country is obtained, including the minarets of Sháhdara, the river Rávi, the broad plain in front of the citadel, the mausoleum of Ranjít Singh, the *Jáma Masjid*, the city, and, in clear weather, a distant glimpse of the Himáláyas. Up to quite recently, some relics of Muhammad, which are said to have been brought into India by Tamerlane, were kept in the Fort. They have now been made over to the *Anjuman-i-Islámia* at Lahore for custody on behalf of the Muhammadan community and deposited in the *Bádsháhi Masjid* or Imperial mosque.

The Armoury.

In the *Bari Khwábgáh* of Sháhjahán is the armoury, which contains a heterogeneous assortment of the weapons and uniforms worn by the Sikh army. Mediæval and modern times are here curiously blended; the round brass bassinet with neck-guard of chain mail, the mace and battle-axe similar to those depicted in the Bayeux tapestry being side by side with modern muskets and rifles and the cuirasses emblazoned with the Gallic cock which the "French guard" of Ranjít Singh wore in emulation of the French cuirassiers. The silver-plated helmets and breast-plates of the Italian and French officers employed by the Sikh ruler are here shown. Here are also specimens of revolving rifles made many years before the perfection of the principle in Europe. Here too is the battle-axe of Guru Gobind Singh, the first warrior *Guru*. Besides these, there is a number of matchlocks, the barrels of some of which are fine examples of intricate and ornamental twisting, and many varieties of sword and dagger. The most important of these are the *talwár*, the ordinary curved sword of the East; and the *kirch*, a long straight sword. Many of those exhibited here with iron and brass hilts were worn by the Sikh artillerymen. A curious weapon is also displayed, consisting of a huge blade with a basket hilt of steel and a steel arm-guard, which could only have been used for thrusting. Accurate models of this mediæval implement are still made in tin with blades of lath, and are used in the mummeries of the Muharram and other Muhammadan festivals. The long and deadly Afghán knife is here; the smaller *pesh-kabz*,

CHAPTER. IV. — Places of interest. — The Armoury.

a straight dagger, sharp on one side, similar to a hunting-knife, and of Persian origin; the *bicchuá*, a venomous looking two-edged and serpentine curved blade, which in some varieties is forked like a flame; and the Hindu *katár* a straight triangular and heavy-bladed *langue de bœuf* dagger, which branches at the hilt into a fork, in which is set a cross-bar at right angles with the blade, by which it is wielded. The bows are nearly all made in three pieces, like the classic bow of antique sculptures. The *chakra*, or war quoit, has not been used in recent times, but the Ákálís or Nihangs still wear these weapons on their fantastic headdresses. There is a great variety of carbines and bell-mouthed weapons, between a pistol and a blunderbus, known by the expressive name of *sher-bacha*. Among the guns are examples of the *zamburahs*, small bore iron cannons mounted on the wooden saddles of camels, and heavy matchlocks, supported on two legs in front like the arquebus of mediæval Europe. Larger than these are the *jazail*—huge musket barrels, roughly mounted, and used like the Chinese jingal, which they much resemble, in protecting forts. The curious light guns mounted on apparently inefficient wheels or castors were invented by Guláb Singh for hill warfare, and were drawn by a man or a goat.

II.—The Jama Masjid.

The *Jama Masjid*.

The *Jama Masjid* is the most striking building in Lahore, and its white domes and lofty *minárs* may be seen for miles round. The inscription in front of the gateway shows that it was built in the year 1084 of the *Hijri*, or A.D. 1674, for the Emperor Aurangzeb, by Fidáe Khán Khokah, whom Bernier mentions as the Great Moghal's master of ordnance. The gateway opens on a large quadrangle paved with brick and overshadowed by two rows of *pípal* trees, a feature of very rare occurrence in this position, the quadrangle of a mosque being usually without vegetation of any kind. As a work of art, it is not to be compared with the Imperial mosque at Dehli, though at first sight it has some resemblance to it. The absence of side entrances and the position of the minarets at the four corners of the quadrangle give the building a very stiff appearance, and we miss the graceful subordination of part to part, which is so pleasing in the Delhi mosque. There is, moreover, a poverty of detail; the *rawaq*, or colonnades at the side, are plain in the extreme, and *minárs*, divested of their cupolas, which were so shattered in the earthquake of A.D. 1840 that they had to be removed, are reminiscent of factory chimneys. At the same time the effect of the arcade of red sandstone adorned with marble tracing, with the tall semi-domed arch in the centre, seen through the imposing gateway, is very fine; and in defence of the architect it may be remarked that many of the defects may be ascribed rather to his orthodoxy than to his bad taste. The arrangement of the mosque is in fact a recurrence to that of the exemplar mosque of Al Walid at Mecca, from which that of the Delhi mosque is a tasteful departure. It has already been mentioned that the building was turned into a magazine by the Sikhs, and only restored to the Muhammadans, who, however, to a certain extent, shun it as an *Akeldama*. An archway known as the Roshnái Gateway leads from the north side of the garden, and it was near here that Nau Nihál Singh, the grandson of Ranjít Singh, and son of the imbecile Kharak Singh, met his death by the fall of a portion of an archway (since destroyed) while on his way from his father's funeral pyre to the *Samman Burj*, where he was to be invested with the dignity of Mahárája.

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Places of Interest.

III.—Ranjít Singh's mausoleum.

Ranjít Singh's mausoleum.

Ranjít Singth's mausoleum, adjacent to the Hazuri Bágh, is a curious mixture of Hindu and Muhammadan ideas, being a compromise between a Hindu *samádh* and a Muhammadan tomb, but there is none of the dignity of the latter style in its comparatively petty details. The door jambs of the shrine itself were originally a very finished example of inlaid work of the same delicate character as that in the palace above. The ceilings are elaborately decorated with tracery in stucco inlaid with small convex mirrors. The marble arches of the interior were in a dangerous state, when Sir Donald McLeod, then Lieutenant-Governor of the Punjab, had them strengthened with brick and *chunam* and clamped with iron. The visitor will generally find priests reading the *Granth*, or Sikh scriptures, a huge volume over which a *chauri* is reverentially waved; or chanting to the accompaniment of the *sitár*. In the centre is a raised stone platform on which is a marble lotus flower, surrounded by eleven smaller ones. The central flower covers the ashes of the Mahárája, the other those of four wives and seven slave girls who perished on his funeral pyre. In small niches in the side walls are to be seen images of the ordinary Hindu gods, to abolish which was one of the original objects of the Sikh faith. On the further side of the Mausoleum are two other domed buildings containing similar but less costly memorials of Kharak Singh and of Nau Nihál Singh. Below the mausoleum of Ranjít Singh by the side of the road leading from the Roshnái Gate to the external plain, is the Shrine of Arjun Dáss, the fifth Sikh Guru, and compiler of the *Adi Granth* which now forms the principal portion of the Sikh scriptures. Here, according to Sikh tradition, the sage miraculously disappeared beneath the waters of the Rávi, which in the time of Jahángír flowed under the fort walls. A more prosaic legend says that the holy man committed suicide to escape the enmity of Chandu Sháh, the Prime Minister of the Emperor. There is nothing architecturally interesting in the building itself. Close by Arjan's shrine is the fort entrance. To the right on entering lies a temple to Síta, now in ruins, which is said to have stood on the edge of the Rávi before the fort was built, marking the spot where Síta, wife of Ráma, while in exile, brought forth Láhu and Kusu in the house of *Válmík*, the author of the Rámáyána. Passing through the outer gate, guarded by sentries of an English regiment, there is, turning to the left, a space of about 50 yards between the outer walls and the Palace front, where can be examined the striking decorations which adorn the facade.

IV.—Wazír Khán's mosque and neighbouring buildings.

Wazír Khan's Mosque.

The mosque of Wazír Khán was built on the site of the tomb of an old Ghaznivide saint in A.D. 1634 by Hakím Alí-ud-dín, a Pathán of Chiniot, who rose to the position of *Wazír* in the reign of Sháhjahán. It is remarkable for the profusion and excellence of the inlaid pottery decorations in the panelling of the walls. Local legend says that artists were sent for expressly from China to execute the work; but there is no historical authority for this, nor is there any trace of Chinese style in either the design or the execution. Its origin is manifeslty Persian, and the descendants of the draftsmen employed to this day pride themselves on their Persian origin. It will be observed that in these arabesques each leaf and each detached portion of the white ground is a separate piece of pot or tile, and that the work is strictly inlay and not painted decoration. The panels of pottery are set in hard

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Wazir Khan's Mosque.

mortar. In the mosque itself are some very good specimens of Perso-Indian arabesque painting on the smooth *chunam* walls. This work, which is very freely painted and good in style, is true fresco painting, the *buono fresco* of the Italians, and, like the inlaid ceramic work, is now no longer practised, modern native decoration being usually *fresco secco* or mere distemper painting. The reason of this is that there has been no demand for this kind of work for many years. Though the builder was a native of the Punjab, the style is more Perso-Moghal and less Indian than that of any other building in the city. Two chronograms inscribed on the walls give the date of the foundation of the mosque. One—*Sijda-gáh-i-Ahl-Fazl*—"The Worshipping Place of the Sons of Grace." Another—*Bani Masjid Wazír Khán*—"The founder of the mosque is Wazír Khán." From the *minárs* of this mosque the best view of the city proper is obtained.

The Golden Mosque.

Proceeding to the left of the building along a street which is remarkable for the overhanging balconies carved with a profusion of geometrical tracery and ornament, the visitor will observe the gilt melon-like domes of the *Sunahri Masjid* or Golden Mosque, which was built in A.D. 1753 by Bikhári Khán, a favourite in the court of the widow of Mír Mannu, a lady who governed Lahore for some time after the death of her husband, the gallant opponent of Ahmad Shah. It is said that having incurred the displeasure of his mistress, he was beaten to death with shœs by her women. The domes are pretty, and the situation at the junction of two roads, is picturesque; but there is nothing of architectural interest in the mosque itself.

The *Hazúri Bágh*.

Behind the mosque is a *báoli* or large well, with steps descending to the water's edge. The well is said to have been dug by Arjan, the fifth Sikh Gurú; the superstructure was built by Ranjít Singh. Passing along the narrow winding street the open space known as Híra Mandi is reached. Here, the ground being cleared for a space round the massive walls of the fort, is a fine view of the fortress and Jama Masjid. Turning to the right the visitor passes under a gateway between the two, and finds himself in a pleasant garden, the *Hazúri Bagh*. On the right is a high crenellated wall, and in the centre a massive gateway of somewhat ruinous appearance, the Akbari Darwáza, which was made by Akbar, and was the ancient entrance to the citadel. The visitor cannot fail to note the elegant design of the towers of this building.

To the left is the quadrangle of the Jama Masjid, raised on a lofty platform set on arches with an imposing archway of red sandstone and marble. The flight of steps is paved with a beautifully variegated stone from Kábul, known as *abrí*. This stone is also found in the Kowagár hills in the Ráwalpindi District, and was a favourite material with Muhammadan builders for inlaid floors. In the centre of the garden is an elegant marble pavilion of two stories, and, looking further on, the hybrid ornamentation of the mausoleum of Ranjít Singh is visible. The place is fraught with historical associations. In the days when the Jama Masjid was daily resorted to by crowds of worshippers, and the power of the Mughal Emperors was in its prime, this garden was a *sarái* thronged with vast retinues of armed men exhibiting all the noisy pomp and glitter of Eastern sovereignty.

Ranjít Singh, who was not generally moved by æsthetic considerations, for once in his life showed some taste in converting it into an ornamental pleasure-ground; and, although it is hard to forgive the ruthless vandalism

he displayed in tearing away the material for the marble edifice in the centre from the tombs of Asaf Khán and the Emperor Jahángir at Shahdara, it must be confessed that the pavilion is architecturally a success. Here the Sikh ruler used to sit and transact business of State, or, in official parlance, held *katcheri.* The Jama Masjid was then a magazine, and the place of prayer of the faithful was covered with his munitions of a war. Here, too, a few years later, stood Sher Singh, watching the effect of the cannonade of the fort gateway during the four days' siege that ended in his accession to the throne. The marks of the shot fired on this occasion are still visible on the east walls of the pavilion.

The *Hazúri Bágh.*

V.—Sháhdara Gardens.

Sháhdara Gardens.

The Sháhdara gardens owe their existence to the tomb of Jahángír raised by the devoted widow Núr Jahán in memory of her husband. The gardens probably grew up gradually around the tomb. The tomb itself is still a very striking building and its four high minarets with their graceful cupolas of white marble are visible for miles round: from all accounts however it was a very much grander edifice as originally constructed, having since then received very rough treatment both from Muhammadans and Sikhs. The tomb is approached by four corridors leading from the garden, three of which are closed by perforated marble screens. The sarcophagus is of marble decorated with coloured inlay. On two sides are inscribed the 99 attributes of God, and on the top is an extract from the Korán. At the head is a Persian inscription, of which the following is a translation:— "The illumined resting-place of His Majesty, the asylum of pardon, Núr-ud-din Jahángír Bádshah, A. H. 1037" (A. D. 1628), giving the date of the erection of the sarcophagus, and—"Reason said Jahángír hath departed from the world, A. H. 1036" (A. D. 1627), giving the date of the emperor's death.

VI.—Shálámár Gardens.

Shálámár Gardens.

The Shálámár gardens were laid out in A. D. 1667, by order of the Emperor Sháhjahán. Local legend says that the Emperor once spending a night at Sháhdara, then just completed by the widowed Empress Núrjahán, had a wondrous dream of a garden like that of Paradise, bright with fruits of gold, marble fountains, cool pavilions, and every variety of foliage. Awaking he sent for Ali Mardán Khán and for Nawáb Fazal Khán, and commanded them to reproduce for him his fleeting vision. They accordingly laid out the garden in seven divisions, representing the seven degrees of the Paradise of Islám. Of these four have been destroyed, and three only are included in the present area, which covers 39 acres, more or less. The actual meaning of the word Shálámár is doubtful. "Hall of desire" (*Shál-i már*) and "Royal Edifice" (*Sháhi-imárat*) are conjectural derivations, but neither is satisfactory. *Sho'lah máh*, Persian for "light of the moon," is another, and has this in its favour, that in Kashmír the name of the garden is spelt without a final "r." The garden itself has the stately formality and symmetry usual in the east. The parallelogram bounding all is subdivided into squares and in the centre is a reservoir bordered by an elaborately indented coping and studded with pipes for *jets d'eau.* A cascade falls into it over a slope of marble corrugated in an ornamental carved diaper. During the troublous times of Ahmad Sháh the gardens were neglected, and some of the decorative works were defaced and removed. Ranjít Singh restored them,

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but at the same time he laid ruthless hands upon the marble pavilions by th central reservoir, using them to adorn the Rámbágh at Amritsar, and sub stituting structures of brick and whitewash in their stead.

VII.—Anárkali's Tomb.

Anárkali's Tomb.

Anárkali's tomb, once used as the station church and Pro-Cathedral and now the store house for Secretariat records, derives its name from Anárkali, the title given to Nádira Begam or Sharíf-ul-Nissa, a favourite slav girl of the Emperor Akbar, who, being suspected of the offence of return ing a smile from Jahángír his son, was buried alive. The edifice wa erected by Jahángír in A. D. 1600, and the marble tomb which once stoo beneath the central dome, but is now in a side chamber, bears the followin Persian inscription :—

Ah gar man báz bínam rúe yár-i-Khesh rá.
Tá qayámat shukr goyam Kirdigár-i-khesh rá.

Ah ! could I behold the face of my beloved once more
I would give thanks unto my God unto the day of resurrection.

VIII.—The Báradari of Wazír Khán.

Wazir Khan's *Báradari.*

This picturesque building, the four cupolas of which are prominen objects in Anárkali, near the Museum and Post Office, is a good example o the favourite Muhammadan form of *báradari* or garden-house, in which, a the name imports, there are twelve arches—three on each side of the squar plan. It has served several purposes in its time, and was once the home o the Museum, and after that of the Library and Reading Room of the Boo Club till the later was removed to the Montgomery Hall. It is now utilise as the Punjab Public Library.

IX.—The Chauburji.

The *Chauburji.*

At the end of the Old Mall on the right hand side of the Multán Road is a fine gateway, commonly called the *Chauburji*, once the entrance int the garden of Zabinda Begam, a learned daughter of Shahjahán, who in he shady retreat on the banks of the *Rávi* composed a volume of mystical poem which are still read and admired under the title of *Diwan-i-Makhti* Urgent repairs have recently been made to its broken masonry, and it ha been walled in.

APPENDICES.

Appendix A.

List of trees, shrubs and woody climbers indigenous or naturalized in the Lahore District with some of the commonly cultivated plants.

T = tree ; S. T. = small tree ; S. = shrub, U. S. = under shrub ; and C. = climber.

Family.	Name.	Vernacular and English names, if any.	Habit.	REMARKS.
Menispermaceæ	Cocculus Leæba, Dc. ...	...	C.	Common.
Capparidaceæ ...	Cadaba indica, Lamk. ...	...	C.	Rare.
Ditto ...	Capparis aphylla, Roth. ...	*Karíl, Karír* ...	S. T.	Common.
Ditto ...	Mærua arenaria, Hook. f. and Th.	...	C.	Ditto.
Ditto ...	Cratæva religiosa, Forst.	*Barna* ...	T.	Occasionally planted.
Tamaricaceæ ...	Tamarix articulata, Vahl.	*Farásh, jarwán.* Tamarisk.	T.	Wild and cultivated.
Ditto ...	Tamarix dioica, Roxb. ...	*Pilchi.* Tamarisk	S.	Along rivers.
Malvaceæ ...	Sida spinosa, Linn. ...	...	U. S.	Chiefly in shady places.
Ditto ...	Urena lobata, Linn. ...	...	U. S.	Ditto.
Ditto ...	Abutilon indicum, Sweet	...	U. S.	Ditto.
Ditto ...	Abutilon bidentatum, Reich	*Patáka* ...	U. S.	Ditto.
Ditto ...	Malvastrum tricuspidatum, A. Gray.	...	U. S.	Quite naturalized and common in moist and shady places.
Tiliaceæ ...	Grewia populifolia, Vahl...	*Gangér* ...	S.	Not common.
Ditto ...	Corchorus Antichorus, Rœusch.	*Bépha'i* ...	U. S.	Ditto.
Meliaceæ ...	Cedrela Toona, Roxb. ...	*Tun.* Toon ...	T.	Occasionally planted.
Ditto ...	Azadirachta indica, Juss.	*Ním* ...	T.	Ditto.
Ditto ...	Melia Azedarach, Linn. ...	*Dharék, bakain.* Persian lilac.	T.	Cultivated and sometimes self sown.
Rhamnaceæ ..	Zizyphus Jujuba, Lamk. ..	*Bér.* Jujube ...	T.	Commonly cultivated.
Ditto ...	Zizyphus nummularia, Dc.	*Malla* ...	S.	Very common.

List of trees, shrubs and woody climbers, &c., &c.—continued.

Family.	Name.	Vernacular and English names, if any.	Habit.	REMARKS.
Vitaceæ ...	Vitis trifolia, Linn. ...	...	C.	Fairly common.
Leguminosæ ...	Crotalaria Burhia, Ham....	...	U. S.	Often common on sandy soils.
Ditto ...	Psoralea plicata, Del. ...	...	U. S.	
Ditto ...	Alhagi camelorum, Fisch	*Jawán, Jowá* ...	U. S.	Locally abundant, especially in sandy place.
Ditto ...	Desmodium gangeticum, Dc.	...	U. S.	In moist shady places.
Ditto ...	Dalbergia Sissoo, Roxb. ...	*Shísham, Tali.* Sissoo.	T.	Commonly cultivated.
Ditto ...	Cassia occidentalis, Linn.	...	U. S.	Common in moist place.
Ditto ...	Cassia Fistula, Linn. ...	*Amaltás* ...	T.	Occasionally planted.
Ditto ...	Prosopis spicigera, Linn.	*Jand* ...	S. T.	Common.
Ditto ...	Acacia Farnesiana, Willd.	*Vilayati Kikar* ...	S.	Completely naturalized in sandy soils along rivers.
Ditto ...	Acacia arabica, Willd. ...	*Kikar* ...	T.	Naturalized and common.
Ditto ...	Acacia leucophlœa, Willd.	*Reru* ...	T.	
Ditto ...	Acacia modesta, Wall. ...	*Phulái*	T.	Cultivated and self-sown.
Ditto ...	Albizzia Lebbek, Benth....	*Siris, Sirín* ..	T.	Ditto.
Combretaceæ ...	Terminalia Arjuna Wight and Arn.	*Arjan* ...	T.	Occasionally planted.
Myrtaceæ ...	Eugenia Jambolana, Lamk	*Jáman* ...	T.	Planted for its fruit and for shade.
actaceæ ...	Opuntia monacantha, Haw.	*Chhithar* or. Prickly pear.	S.	Sometimes grown in hedges and occasionally spread over pieces of waste ground.
Ditto ...	Opuntia str cta, Haw. ...	Ditto	S.	
Ditto ...	Opuntia Dillenii, Haw. ...	Ditto	S.	
Compositæ ...	Pluchea lanceolata, Oliv.	*Résha* ...	S.	Common.
Salvadoraceæ ...	Salvadora oleoides, Dcne.	*Wán*	T.	Ditto.
Asclepiadaceæ ...	Calotropis procera, R. Br.	*Ak* ...	S.	Ditto.
Ditto ...	Pentatropis spiralis, Dcne.	...	C.	Ditto.

List of trees, shrubs and woody climbers, &c., &c.—concluded.

Family.	Name.	Vernacular and English names, if any.	Habit.	REMARKS.
Asclepiadaceæ ...	Dæmia extensa, R. Br. ...	...	C.	Common.
Boraginaceæ ...	Cordia Myxa, Linn. ..	*Lasúra* ...	T.	Planted for its fruit.
Ditto ...	Ehretia aspera, Roxb. ...	...	S.	Not common.
Convolvulaceæ ...	Rivea hypocrateriformis, Chois.		C.	Common.
Solanaceæ ...	Withania somnifera, Dunal.	*Ratkán, Sín* ..	S.	Usually in shady places.
Ditto ...	Lycium europaeum, Linn.	*Kanger, Kango* ...	S.	Fairly common.
Verbenaceæ ...	Clerodendron phlomidis, Linn.	...	S.	Not common.
Amarantaceæ ...	Aerua javanica, Juss. ..		U. S.	Common.
Chenopodiaceæ ...	Salsola foetida, Del. ..	*Láni*	S.	Common on saline soils.
Ditto ...	Suæda fruticosa, Forsk. ...	*Lána* ...	S.	Ditto.
Ditto ...	Haloxylon recurvum, Bunge.	*Khar* ...	S.	Found near Chung; not common.
Ditto	Haloxylon salicornicum, Bunge.	*Shorang* ...	S.	Found near Chúnián.
Urticaceæ ...	Morus alba, Linn. ...	*Tút.* Mulberry ...	T.	Cultivated and self-sown.
Ditto ...	Ficus bengalensis, Linn.	*Bar.* Banyan ...	T.	Planted for shade.
Ditto ...	Ficus religiosa, Linn. ...	*Pípal* ...	T.	Ditto.
Ditto ...	Ficus palmata, Forsk. ..	*Phagwára* ...	S. T.	Found only in moist places.
Ditto ...	Ficus glomerata, Roxb. ...	*Gular* ...	T.	Found only in moist places; introduced.
Salicaceæ ...	Populus euphratica, Oliver.	*Bhán.* Poplar ...	T.	Found along the Ravi, but not common.
Gnetaceæ ..	Ephedra foliata, Boiss. ..	...	C.	Common.
Liliaceæ	Asparagus gracilis, Royle.	..	S.	Fairly common
Palmæ ...	Phoenix dactylifera, Linn.	*Kajúr.* Date Palm	T.	Cultivated and sometimes self sown.
Ditto ...	Phoenix sylvestris, Roxb.	*Kajúr,* Wild date	T.	Ditto.

Appendix B.

**List of birds, including the Game Birds, which occur, or are likely to occur, in the Lahore District.*

1	The Raven	Corvus corax (L.) ...	A common resident.
5	The Rook	Corvus frugilegus (L.) ...	Winter visitor: numerous where occurring.
8	The Indian House Crow ...	Corvus splendens (Vieill.)	Resident and most abundant.
9	The Jackdaw ...	Corvus monedula (L.) ...	Winter visitor in small numbers.
16	The Indian Tree Pie ...	Dendrocitta rufa (Scop.) ...	A common resident.
31	The Indian Grey tit ...	Parus atriceps (Horsf.) ...	Winter visitor.
104	The Striated Babbler ...	Argya earlii (Blyth) ...	Resident in the Sutlej river rain area.
105	The Common Babbler ...	Argya caudata (Dum.) ...	Resident and most adundant.
107	The Large Grey Babbler ...	Argya malcolmi (Sykes) ...	Resident.
110	The Jungle Babbler ...	Crateropus canorus (L.) ...	Resident and common.
139	The Yellow-eyed Babbler ...	Pyctorhis sinensis (Gm.) ...	Resident; most abundant in various area.
226	The Indian White-eye ...	Zosterops palpebrosa (Temm.)	Resident; increased by immigration in winter.
278	The Madras Red-vented Bulbul.	Molpastes hæmorrhous (Gm.)	Abundant and resident.
283	The Punjab Red-vented Bulbul.	Molpastes intermedius (Hoy)	Resident and common.
285	The White-eared Bulbul ...	Molpastes leucotis (Gould)...	Resident and common.
327	The Black Drongo or King Crow.	Dicrurus ater (Herm.) ...	Resident; also a migrant.
241	The Himalayan Tree Creeper.	Certhia Himalayana (Vig.)	A winter visitor.
363	The Indian Great Reed Warbler.	Acrocephalus stentoreus (H. E.)	Spring and autumn passage migrant.
366	Blythis Reed Warbler ...	Acrocephalus dumetorum (Bhytu.).	A spring and autumn passage migrant.
374	The Indian Tailor-bird ...	Orthotomus sutorius (Forst)	A common resident.
381	The Rufous Fantail-Warbler	Cisticola cursitans (Frankl)	Resident and perhaps also summer visitor.

*NOTE.—This list has been compiled to indicate to any naturalist or sportsman what bird he may expect to meet in the Lahore District, with some rough hints as to their status and time of appearance. The list in no way pretends to be correct and there may be a few errors; any additions or corrections to it should be communicated to the Honorary Secretary, Bombay Natural History Society, Apollo Street, Bombay.

List of birds, including the Game Birds, which occur, or are likely to occur, in the Lahore District—continued.

381	The Rufous-Fronted Wren-Warbler.	Franklinia buchanani (Blyth)	A common resident.
386	The Longtailed Grass-Warbler	Laticilla burnesi (Blyth) ...	Resident in the Sutlej grass jungles.
394	Sykes Tree-Warbler ...	Hypolais rama (Sykes) ...	Migratory, but possibly breeds in the riverain jungles.
396	The Booted Tree-Warbler ...	Hypolais caligata (Licht) ...	A scarce migrant.
398	The Whitethroat ...	Sylvia cinerea (Bechst) ...	An autumn migrant.
399	The Eastern Orphean Warbler.	Sylvia jerdoni (Blyth) ...	Scarce, migrant.
401	Humes Lesser Whitethroat	Sylvia althœa (Hume) ...	Scarce, migrant.
402	The Indian Lesser Whitethroat.	Sylvia affinis (Blyth) ...	Abundant winter visitor and passage migrant.
407	The Brown Willow-Warbler	Phylloscopus tristis (Blyth)	Common winter visitor.
408	The Olivaceus Willow-Warbler.	Phyllocopus indicus (Jerd.)	Scarce, migrant.
416	The Brook's Willow-Warbler.	Phylloscopus sub-viridis (Brooks).	Common migrant.
418	Humes Willow Warbler ...	Phylloscopus numii (Brooks)	Ditto.
421	The Green Willow-Warbler	Acanthopneusta nitidus (Blyth).	Ditto.
422	The Greenish Willow-Warbler	Acanthopneusta viridanus (Blyth).	Ditto.
428	The Large Crowned Willow Warbler.	Acanthopneusta occipitalis (Jerd.).	Ditto.
462	The Streaked Wren-Warbler	Prinia lepida (Blyth) ...	Common and resident.
464	The Ashy Wren-Warbler ...	Prinia socialis (Sykes) ...	Ditto.
66	The Indian Wren-Warbler...	Prinia inornata (Sykes) ...	Ditto.
469	The Indian Grey Shrike ..	Lanius lahtora (Sykes) ...	Ditto.
473	The Baybacked shrike ...	Lanius vitratus (Val.) ...	Common resident; also summer visitor.
476	The Rufous backed shrike ...	Lanius erythronotus (Vig.)	Common and migratory perhaps also resident.
499	The Pale Brown Shrike	Lanius isabellinius (Ehv.) ...	Winter visitor in small numbers.
495	The Short-billed Minivet ..	Pericrocotus brevirostris (Vis).	Common winter visitor.
500	The Small Minivet ...	Pericrocotus perigrinus (L.)	Resident in small numbers.

List of birds, including the Game Birds, which occur, or are likely to occur, in the Lahore District—continued.

518	The Indian Oriole ...	Oriolus Kundoo (Sykes) ...	Abundant summer visitor.
528	The Rose-coloured Starling	Pastor roseus (L.) ...	Abundant, but numbers vary in different years. Winter visitor and passage migrant. Never breeds.
532	The Common Indian Starling	Sturnus menzbieri (Sharp)	Winter visitor and passage migrant.
549	The Common Mynah ...	Acridotheres tristis (L.)	Abundant and resident.
551	The Bank Mynah ...	Acridotheres ginginianus (Lath.).	Common but exact status uncertain.
561	The European Redbreasted Flycatcher.	Syphia parva (Bechst) ...	Common spring and autumn passage migrant; also winter visitor in small numbers.
594	The Grey-headed Flycatcher	Culicicapa zeylonensis ...	Occasional straggler.
598	The Paradise Flycatcher ..	Terpsiphone paradisi (L.) ...	Passage migrant; possibly also in small numbers.
604	The White-browed Fantail Flycatcher.	Rhipidura albifrontata (Frankl.)	Common and resident.
608	The Common Pied Bush Chat	Pratincola caprata (L.) .	Common summer visitor.
610	The Indian Bush Chat ..	Pratincola maura (Pall) ..	Common winter visitor.
611	The White-tailed Bush-Chat	Pratincola leucura (Blyth)	Straggler to the Sutlej riverain.
618	The Pied Chat ...	Saxicola picata (Blyth) ...	Winter visitor.
619	The White-headed Chat ...	Saxicola capistrata (Gould)	Ditto.
620	Strickland's Chat ...	Saxicola opistholeuca (Strickl.).	Ditto.
625	The Isabelline Chat ..	Saxicola isabellina (Cretz.)	Ditto.
626	The Desert Chat ..	Saxicola deserti (Temm.) ...	Ditto.
629	The Brown Rock Chat ...	Cercomela fusca (Blyth) ...	Common resident.
644	The Indian Redstart ...	Ruticilla rufiventris (Vieill.)	Abundant winter visitor.
647	The Red-spotted Blue-throat	Cyanecula suecica (L.) ...	Common migrant and winter visitor.
641	The Brownbacked Indian Robin.	Thamnobia cambaiensis (Lath.).	Common and resident.
663	The Magpie-Robin ...	Copsychus saularis (L.) ...	Common resident.
677	The Black-Throated Thrush	Merula atrigularis (Temm.)	Winter visitor in small numbers.
693	The Western Blue Rock-Thrush.	Petrophila cyanus (L.) ..	Passage migrant in small numbers.

List of birds, including the Game Birds, which occur, or are likely to occur, in the Lahore District—continued

694	The Rock Thrush ...	Monticola Saxatilis (L.) ...	One shot at Lahore on 18th September 1912.
695	The Missel Thrush ...	Turdus viscivorus (L.) ..	Shot at Gogera on Rávi, January 1913—Jour. B. N. H. S., xxii, 392.
720	Blyth's Baya ...	Ploceus baya (Blyth) ...	Summer visitor.
734	The White-throated Munia...	Uroloncha malabarica (L.)	Common resident.
738	The Indian Red Munia ...	Sporæginthus amandava (Pall.)	Common in the riverain grass jungles.
761	The Common Rose Finch ...	Carpodacus erythrinus (L.)	Spring passage migrant.
775	The Yellow-throated Sparrow	Gymnorhis flaricollis (Fromtil .	Common summer visitor.
776	The House Sparrow ...	Passer domesticus (L.)	Abundant resident.
777	The Rufus-backed Sparrow	Passer pyrrhonotus (Blyth)	Common but local.
793	The White-capped Bunting	Emberiza stewarti (Blyth) ...	A winter visitor.
794	The Eastern Meadow Bunting	Emberiza stracheyi (Moore)	Ditto.
799	The Black-headed Bunting .	Emberiza melanocephala (Scop)	Passage migrant.
800	The Red-headed Bunting ...	Emberiza hitcola Sparrin)	Ditto.
802	The Striolated Bunting	Emberiza striolata (Licht.)	Possibly resident but scarce.
805 A	The Pale-Sand Martin .	Cotila diluta (S. and W.) ...	Breeds, but probably migratory.
813	The Swallow ...	Hirundo rustica (L.) ...	Migratory ; does not breed.
818	The Wire-tailed Swallow	Hirundo smitii (Leach)	Common summer visitor.
823	Sykes' Striated Swallow .	Hirundo erythropygia (Sykes)	Migratory : a few probably breed.
826	The White Wagtail ...	Motacilla alba (L.) ...	Spring and autumn passage migrant; also winter visitor.
829	The Masked Wagtail ..	Motacilla personata (Cld.) ...	Ditto ditto.
831	The Large Pied Wagtail ...	Motacilla maderaspatensis (Gmn.).	Probably resident in small numbers.
832	The Grey Wagtail ...	Motacilla melanope (Pall)...	Winter visitor or passage migrant ; does not breed within the district.
833	The Grey-headed Wagtail...	Motacilla borealis (Sundev.)	All winter visitors or passage migrants ; none breed within the district.
834	The Indian Blue-headed Wagtail.	Motacilla beema (Sykes) ...	
836	The Black-headed Wagtail	Motacilla feldeggi (Mich) ...	
837	The Yellow-headed Wagtail	Motacilla citreola (Pall, ...	

List of birds including the Game Birds, which occur, or are likely to occur, in the Lahore District—continued.

838	Hodgson's Yellow-headed Wagtail.	Motacilla citreoloides (Hodgs.).	Remarks as for Nos. 833 to 837.
840	The Tree Pipit ...	Anthus trivialis (L.) ...	Spring and autumn passage migrant.
844	The Brown Rock Pipit ...	Anthus similis (Jerd.) ...	Status uncertain.
847	The Indian Pipit ...	Anthus rufulus (Vieill.) ...	Probably summer visitor only.
848	The Tawny Pipit ...	Anthus campestris (L.) ...	Common winter visitor.
859	The Eastern Calandra-lark ..	Melanocorypha fimaculata (Men.)	Winter visitor in flocks.
860	The Sky Lark ...	Alauda arvensis (L.) ...	Ditto
861	The Indian Sky Lark ...	Alauda gulgula (Frankl.)	Resident.
862	The Short-toed Lark ...	Calandrella brachydactyla (Leish).	All these three races of short-toed larks may be expected in the large flocks that arrive in winter.
864	Brooks' Short-toed Lark ..	Calandrella tibetana (Brooks.)	
865	Hume's Short-toed Lark ...	Calandrella acutirostris (Hume).	
867	The Indus Sand Lark ...	Alaudula adamsi (Hume) ...	Resident in the riverain area.
869	The Singing Bush Lark ...	Mirafra cantillans (Jerd.)	Perhaps only a summer visitor.
874	The Crested Lark ...	Galerita cristata (L.) ...	Common and resident.
879	The Ashy Crowned Finch Lark.	Pyrrhulauda grisea (Scop.)	Status uncertain.
895	The Purple Sun Bird ...	Arachnethra asiatica (Lath.)	Abundant summer visitor.
972	The Yellow Fronted Pied Wood-picker	Liopicus mahrathensis (Lath.)	Common and resident
986	The Golden backed Wood-pecker.	Brachypternus aurantuis (L.)	Abundant resident.
1003	The Common Wryneck	Iynx torquilla (Lim.) ...	Passage migrant; does not breed.
1019	The Crimson-breasted Barbet	Xantholæma hæmatocephala (P.L.S. Müll).	Common resident.
1022	The Indian Roller ...	Coracias indica (L.) ...	Abundant resident.
1026	The Common Indian Bee eater	Merops viridis (Linn.) ...	Abundant summer visitor.
1027	The Blue tailed Bee-eater	Merops philippinus (L.) ...	Summer visitor.
1033	The Indian Pied Kingfisher	Ceryle varia (Strickl.) ...	Common and resident.
1035	The Common Kingfisher ...	Alcido ispida (L.) ...	Status uncertain.
1044	The White Breasted King-fisher.	Halcyon smyrnensis (L.) ...	Common resident.

List of birds including the Game Birds, which occur, or are likely to occur, in the Lahore District - continued.

1062	The Common Grey Hornbill	Lophoceros birostris (Scop)	Status doubtful.
1066	The European Hoopoe ...	Upupa epops (L.) ...	Resident and mgirant.
1069	The European Swift ...	Cypselus apus (L.) ...	Passage migrant.
1073	The Common Indian Swift	Cypselus affinis (Gray and Hardw).	Resident, also migrant.
1090	Franklin's Nightjar ...	Caprimulgus monticola (Fr.)	A migrant.
1104	The Cuckoo ...	Cuculus canorus (L.) ...	A passage migrant.
1120	The Indian Koel ...	Eudynamis honorata (L.) ...	Abundant summer visitor.
1130	The Common Coucal ...	Centropus sinensis (Steph.)...	Resident but local.
1135	The Large Indian Paroquet	Palæornis nepalensis (Hodgs.)	Common resident.
1138	The Rose-ringed Paroquet ...	Palæornis torquatus (Bodd.)	Resident and abundant.
1159	The Western Blossom-headed Paroquet.	Palæornis cyanocephalus (L.)	Status doubtful.
1152	The Barn Owl ...	Strix flammea (L.) ...	Resident.
1157	The Short-eared Owl ...	Asio accipitrinus (Pall) ...	A winter visitor.
1169	The Dusky Horned Owl ...	Bubo coromandus (Lath.) ...	A resident.
1180	The Spotted Owlet ...	Athene brama (Temm.) ...	Resident and abundant.
1190	The Cinereous Vulture ...	Vultur monachus (L.) ...	Winter visitor.
1191	The Black or King Vulture	Otogyps calous (Scop.) ...	Resident and not uncommon.
1192	The Griffon Vulture ...	Gyps fulvus (Gm.) ...	A winter visitor.
1196	The Indian White-backed Vulture.	Pseudogyps bengalensis ... (Gm.)	Abundant resident.
1198	The Egyptian Vulture ...	Neophron percnopterus (L.)	Abundant resident.
1201	The Imperial Eagle ...	Aquila heliaca (Saw.) ...	Winter visitor.
1202	The Steppe Eagle ...	Aquila bifasciata (Gray) ...	Ditto
1203	The Indian Tawny Eagle ..	Aquila vindhiana (Frankl)	Common and resident.
1207	Bonelli's Eagle ...	Aquila fasciatus (Vieil.) ...	Resident.
1208	The Booted Eagle ...	Aquila pennatus (Gml.) ...	Occasional visitor.
1220	The White-eyed Buzzard-Eagle.	Butastur teesa (Frankl.) ...	A summer visitor.
1223	Pallas' Fishing Eagle ...	Haliaetus leucoryphus (Pall.)	Resident.
1228	The Brahminy Kite ...	Haliastur indus (Bodd.) ...	Status uncertain.
1229	The Common Pariah Kite ...	Milvus govinda (Sykes) ...	Resident and most abundant.
1232	The Black-winged Kite ...	Elanus cæruleus (Desf.) ...	Status uncertain.

List of birds, including the Game Birds, which occur, or are likely to occur, in the Lahore District—continued.

1233	The Pale Harrier ...	Circus macrurus (S. G. Gmel.)	Passage migrant.
1237	The Marsh Harrier ...	Circus æruginosus (L.) ...	Winter visitor.
1239	The Long-legged Buzzard ...	Buteo ferox (S. G. Gmel.) ...	Ditto.
1244	The Shikra	Astur badius (Gmel.) ...	Common resident.
1247	The Sparrow Hawk ...	Accipitur nisus (L.) ...	Migratory; does not bre
1249	The Crested Honey Buzzard	Pernis cristatus (Cuo.) ...	Probably a summer visitor only.
1254	The Peregrine Falcon ...	Falco peregrinus (Tunst.) ...	A winter visitor.
1255	The Barbary Falcon ...	Falco barbarus (Lumn.) ...	Ditto.
1257	The Laggar Falcon ...	Falco jugger (Gray) ...	A common resident.
1258	The Saker Falcon ...	Falco cherrug (Gray) ...	A winter visitor.
1263	The Merlin	Assalon regulus (Pall) ...	Ditto.
1264	The Kestrel	Tinnunculus alaudarius (Gmel).	Ditto.
1272	The Southern Green Pigeon	Crocopus chlorogaster (Blyth)	Status uncertain.
1292	The Indian Blue Rose-pigeon.	Columba intermedia (Strickl.)	Most abundant resident.
1295	The Eastern Stock Dove ...	Columba eversmanni (Bonap.)	A migrant.
1305	The Indian Turtle Dove ...	Turtur ferrago (Eversm.) .	Passage migrant.
1309	The Little Brown Dove ...	Turtur cambayensis (Gm.) ..	Abundant and resident.
1310	The Indian Ring Dove .	Turtur risorius (L.) ...	Ditto.
1311	The Red Trutle Dove ..	Œnopopelia tranquebarica (Herm).	Common summer visitor.
1316	The Imperial Sandgrouse ..	Pterocles arenarius (Pall) ...	A winter visitor.
1321	The Common Sandgrouse ...	Pteroclurus exustus (Temm.)	Resident; also migratory.
1324	The Common Peafowl ...	Pavo cristatus (L.) ...	A resident.
1355	The Grey Quail ...	Coturnix communis (Bonn.)	Spring and autumn passage migrant.
1358	The Rock Bush Quail ...	Perdicula argunda (Sykes) ...	Status uncertain.
1372	The Black Patridge ...	Francolinus vulgaris (Steph.)	A resident, but local.
1375	The Grey Partridge ...	Francolinus pondicerianus (Genl.)	A common resident.
1383	The Little Button Quail ...	Turnix dussumieri (Temm.)	Scarce.
1393	The Eastern Baillou's Crake	Porzana pusilla (Tall.) ...	Wrinter visitor.
1402	The Moorhen	Gallinula chloropus (L.) ...	Probably resident.
1405	The Coot	Fulica atra (Linn.) ...	Resident.

List of birds, including the Game Birds, which occur, or are likely to occur, in the Lahore District—continued.

1407	The Common Crane ...	Grus communis (Bechrt.) ...	A winter visitor.
1411	The Demoiselle Crane ...	Anthropoides virgo (L.) ...	Ditto
1414	The Great Indian Bustard ...	Eupodotis edwardsi (Gray)	May be expected to occur occasionally.
1415	The Houbara Bustard ...	Houbara macqueeni (Gray)	Winter visitor.
1418	The Stone Curlew ...	Œdicnemus scolopax (S. G. Gmel.)	Status uncertain.
1419	The Great Stone Plover ...	Esacus recurvirostris (Guv.)	Confined to the riverain.
1422	The Indian Courser ...	Cursorius Coromandelicus (Gm.)	Status uncertain.
1423	The Cream-coloured Courser	Cursorius gallicus (Gm.) ...	Ditto.
1427	The Little Indian Pratincole	Glareola lactea (Temm.) ...	Summer visitor, breeding in the river beds.
1429	The Pheasant-tailed Jacana	Hydrophasianus chirurgus (Scop.).	Rains visitor.
1431	The Red-wattled Lapwing ...	Sarcogrammus indicus (Bodd).	Common resident.
1436	The Lapwing ...	Vanellus vulgaris (Bechst)...	Winter visitor.
1437	The Sociable Lapwing ...	Chettusia gregaria (Pall) ...	Ditto.
1438	The White-tailed Lapwing	Chettusia leucura (Licht.) ...	Ditto.
1439	The Eastern Golden Plover	Charadrius fulvus (Gm.) ...	Ditto.
1446	The Kentish Plover ...	Aegialitis alexandrina (L.)...	Migrant.
1447	The Little Ringed Plover ...	Aegialitis dubia (Scop.) ...	A resident.
1451	The Blackwinged Stilt ...	Himantopus candidus (Bonn)	Winter visitor and passage migrant.
1454	The Curlew ...	Numenius arquata (L.) ...	All the Waders Nos. 1454-87 are winter visitors or passage migrants; none of them breed within the district although individual stragglers of certain kinds, notably Nos. 1460, 1462 and 1466, may be met with throughout the summer.
1455	The Black-tailed God wit ...	Limosa belgica (Gm.) ...	
1460	The Common Sandpiper ...	Totanus hypoleucus (L.) ...	
1461	The Wood Sandpiper ...	Totanus glareola (Gm.) ...	
1462	The Green Sandpiper ...	Totanus ochropus (L.) ...	
1463	The Marsh Sandpiper ...	Totanus stagnatilis (Bechrt.)	
1464	The Redshank ...	Totanus calidris (L.) ...	
1465	The Spotted Redshank ...	Totanus fuscus (L.) ...	
1466	The Green Shank ...	Totanus glottis (L.) ...	
1468	The Ruffe and Reeve ...	Pavoncella pugnax (L.) ...	
1471	The Little Stint ...	Tringa minuta (Leisler) ...	
1474	Temminck's Stint ...	Tringa temmincki (Leisler	
1478	The Dunlin ...	Tringa alpina (L.) ...	
1484	The Common Snipe ...	Gallinago cœlestis (Frenzl)	
1487	The Jack Snipe ...	Gallinago gallinula (L.) ...	

List of birds including the Game Birds, which occur, or are likeiy to occur, in the Lahore District—continued.

1488	The Painted Snipe ...	Rostratula capensis (L.) ...	Scarce : possibly breeds.
1490	The Laughing Gull ...	Larus ridibundus (L.) ...	Winter straggler.
1495	The Yellow-legge l Herring Gull.	Larus cachinnans (Pall) ...	Ditto.
1496	The Whiskered Tern ...	Hydrochelidon hybrida (Pall)	Passage migrant.
1498	The Caspian Tern ...	Hydroprogne caspia (Pall) ...	Winter straggler.
1499	The Gull-billed Tern ...	Sterna anglica (Mont.) ...	Breeds on the Chenab.
1503	The Indian River Tern ..	Sterna seena (Sykes) ...	Abundant resident.
1504	The Blackbellied Tern ...	Sterna melanogaster (Temm.)	Ditto.
1510	The Little Tern ...	Sterna minuta (L). ...	Summer visitor.
1517	The Indian Skimmer ...	Rhynchops albicolis (Swain)	Ditto.
152	? Sp. Pelican ...	Pelicanus sp. ? ...	Occasionally to be seen.
1526	The Large Cormorant ...	Phalacrocorax carba (L.) ...	Status uncertain.
1528	The Little Cormorant ...	Phalacrocorax javanicus (Horsf.).	Ditto.
1529	The Indian Darter ...	Plotus melanogaster (Penn.)	Ditto.
1541	The White Ibis ...	Ibis Melanocephala (Lath.)	Ditto.
1542	The Black Ibis ...	Inocotis papillosus (Temm.)	Resident.
1545	The Spoonbill ...	Platalea leucorodia (Lind.)...	Status uncertain.
1546	The White Stork ...	Ciconia alba (Bechst) ...	Winter visitor.
1548	The White-necked Stork ...	Dissura episcopues (Bodd.) ...	Status uncertain.
1549	The Black-necked Stork ...	Xenorhynchus asiaticus (L.)	Ditto.
1552	The Painted Stork ...	Pseudotantalus leucocephalus (Penn.).	Summer visitor.
1553	The Open-bill ...	Anastomus oscitans (Bodd.	A scarce straggler.
1554	The Eastern Purple Heron...	Ardea manillensis (Sharp) ..	Status uncertain.
1555	The Common Heron ...	Ardea cinerea (Linn.) ...	Probably resident.
1559	The Large Egret ...	Herodius alba (L.) ...	Resident or winter visitor
1561	The Little Egret ...	Herodius garzetta (L.) ...	Summer visitor.
1562	The Cattle Egret ...	Bubulcus coromandus (Bodd.)	Ditto.
1565	The Pond Heron or Paddybird	Ardeola grayi (Sykes) ...	A common resident.
1567	The Little Green Heron ..	Butorides javanica (Horsf.)	Status uncertain.
1568	The Night Heron ...	Nycticorax griseus (L.) ..	Summer visitor.
1574	The Bittern ...	Botaurus stellaris (L.) ...	Winter visitor.

List of birds, including the Game Birds, which occur, or are likely to occur, in the Lahore District—concluded.

1577	The Mute Swan ...	Cygnus Olor (Gm.) ..	One shot near Lahore, 6th February 1911.
1579	The Gray Lag Goose ...	Anser ferus (Schaeff.) ...	A winter visitor.
1583	The Bar-head Goose ...	Anser indicus (Lath.) ...	Common winter visitor.
1584	The Combduck or Nukta ...	Sarcidiornis melanonotus (Penn.)	Scarce, but has bred in the district.
1588	The Ruddy Sheldrake or Brahminy Duck.	Casarca rutila (Pall) ..	Common winter visitor.
1592	The Mallard ...	Anas boscas (L.) ..	Ditto.
1593	The Spot-billed Duck ...	Anas paecilorhyncha (Forst.)	Winter visitor but a few pairs probably breed in the district.
1595	The Gadwall ...	Chaudelasmus streperus (L.)	Common winter visitor.
1597	The Common Teal ...	Nettium Crecca (L.) ...	Abundant winter visitor.
1599	The Wigeon ...	Mareca penelope (L.) ...	Winter visitor.
1600	The Pintail ...	Dafila acuta (L.) ...	Ditto.
1601	The Garganey Teal ...	Querquedula circia (L.) ...	Probably passage migrant.
1602	The Shoveller ...	Spatula clypeata (L.) ...	Common winter visitor.
1604	The Red-crested Pochard ...	Netta rufina (Pall) ...	Winter visiter.
1605	The Pochard ...	Nyroca ferina (L.) ..	Ditto.
1606	The White-eyed Pochard ...	Nyroca ferruginea (Gm). ...	Ditto.
1609	The Tufted Duck	Nyroca fuligula (L.) ...	Ditto.
1612	The Smew ...	Mergus albellus (Linn.) ...	Probably occurs in winter.
1617	The Indian Little Grebe ...	Podicipes albipennis (Sharp)	Common resident.

Appendix C.

Lahore Municipality.

Statement showing the octroi articles exported from Lahore during the undermentioned years.

Names of Articles.	1910-11.			1911-12.		
	Value.	Weight.	Number.	Value.	Weight.	Number.
Class I.	Rs.	Mds.		Rs.	Mds.	
Wheat and wheat-flour ...	...	125,712	...	...	125.610	...
Rice ...	...	27,169	...	...	22,118	...
Barley and gram ...	...	16,417	...	...	11.099	...
Other food-grains ..	...	10,849	...	...	11,772	...
Refined sugar ...	...	17,402	...	...	22,033	...
Unrefined sugar ...	...	11,604	...	...	23,909	...
Ghee ...	...	3,029	...	...	2,798	...
Other articles used for food and drink for men and animals.	89,228	55,801	.	1,25,305	50,399	...
Class II.						
Animals ...	...	..	49,930	...	...	50,306
Class III.						
Oil ...	...	3,889	...	...	3,996	...
Oilseeds ...	...	6,321	...	...	5,174	...
Other articles of fuel, lighting and washing.	75,067	27,610	...	10,879	22,398	...
Class IV.						
Articles for buildings ...	18,725	36,150	5,700,000	1,02,296	50,392	4,770,000
Class V.						
Chemicals, drugs and spices	57,818	...	...	48,388	...	...
Gums ...	...	...	...	...	...	...
Other articles ...	2,202	...	...	15,255	...	...
Class VI.						
Tobacco ...	84,610	13,370	...	83,505	7,733	...
Class VII.						
Native cloth and articles made of it.	2,86,323	...	...	3,05,827	...	...
Other cloth and articles made of it.	1,41,965	...	...	3,17,817	...	...
Leather and articles made from leather.	3,07,997	...	...	3,42,795	...	...
Other articles ...	51,186	...	...	63,097	...	...
Class VIII.						
Metals and articles made wholly or partly of metals.	6,12,398	...	...	5,40,036	...	...
Class XI.						
Miscellaneous ...	...	...	...	...	...	...

Statement showing the octroi articles exported from Lahore during the undermentioned years – continued.

Names of Articles.	1912-13.			1913-14.		
	Value.	Weight.	Number.	Value.	Weight.	Number.
CLASS I.	Rs.	Mds.		Rs.	Mds.	
Wheat and wheat-flour ...	...	185,736	...	...	205,271	...
Rice	...	21,390	...	...	40,600	...
Barley and gram ...	...	13,442	...	...	13,779	...
Other food-grains ...	...	10,188	...	...	14,250	...
Refined sugar	...	20,494	...	...	23,614	...
Unrefined sugar ..	..	25,788	...	...	20,654	...
Ghee	...	3,425	...	...	3,563	...
Other articles used for food and drink for men and animals.	1,05,365	59,733	...	1,13,152	26,133	...
CLASS II.						
Animals	...	...	44,463	...	...	39,184
CLASS III.						
Oil	...	3,192	...	...	...	...
Oilseeds	...	2,904	...	...	...	...
Other articles of fuel, lighting and washing.	60,800	42,647	...	10,202	73,628	...
CLASS IV.						
Articles for buildings ...	84,792	56,973	6,000,600	14,933	36,297	2,000,000
CLASS V.						
Chemicals, drugs and spices	46,209	...	...	42,602	...	...
Gums	105	...	...	257	...	...
Other articles	33,296	...	...	4,485	...	...
CLASS VI.						
Tobacco	1,21,012	3,113	...	1,29,777	2,532	...
CLASS VII.						
Native cloth and articles made of it.	1,96,000	...	...	1,87,735	...	...
Other cloth and articles made of it.	4,01,674	...	...	4,36,150	...	...
Leather and articles made from leather.	2,63,244	...	...	...	...	...
Other articles ...	1,98,855	...	...	2,22,096	...	...
CLASS VIII.						
Metals and articles made wholly or partly of metals.	4,38,483	...	...	4,54,683	...	...
CLASS IX.						
Miscellaneous	...	...	...	6,63,924	533	...

Statement showing the octroi articles exported from Lahore during the undermentioned years—concluded.

Names of Articles	1914-15. Value.	Weight.	Number.	Remarks.
CLASS I.	Rs.	Mds.		
Wheat and wheat-flour ..	...	175,048	...	
Rice	...	28,074	..	
Barley and gram ...	...	16,399	...	
Other food-grains ...	...	16,564	...	
Refined sugar	...	30,625	...	
Unrefined sugar ...	...	13,669	...	
Ghee		3,898	...	
Other articles used for food and drink for men and animals.	99,206	45,237	...	
CLASS II.				
Animals	...	...	39,807	
CLASS III.				
Oil	...	...	...	In accordance with the new schedule oil and oilseeds are included in Class IX from 1st August 1913.
Oilseeds	...	...	...	
Other articles of fuel; lighting and washing.	11,200	50,302	...	
CLASS IV.				
Articles for buildings ...	1,49,233	41,629	2,266,000	
CLASS V.				
Chemicals, drugs and spices	73,364	...	...	
Gums	664	...	...	
Other articles	1,325	...	...	
CLASS VI.				
Tobacco	76,820	18,917	...	
CLASS VII.				
Native cloth and articles made of it.	1,42,197	...	...	
Other cloth and articles made of it.	3,50,016	...	...	
Leather and articles made from leather.	...	...	...	
Other articles ...	1,80,943	...	...	
CLASS VIII.				
Metals and articles made wholly or partly of metal.	4,75,306	...	...	
CLASS IX.				
Miscellaneous	9,17,902	2,133	...	New class added from 1st August 1913.

Appendix D.

Statement showing the octroi articles imported into Lahore during the undermentioned years.

Names of Articles.	1910-1911.			1911-1912.		
	Value.	Weight.	Number.	Value.	Weight.	Number.
	Rs.	Mds.		Rs.	Mds.	
CLASS I.						
Wheat and wheat-flour	...	1,074,828	...	...	993,550	...
Rice ...	...	164,461	...	...	169,957	...
Barley and gram ...	...	239,734	...	.	271,518	
Other food-grains ...	...	129,884	...	...	103,723	...
Refined sugar ...	...	101,581	...		106,741	...
Unrefined sugar ...	...	40,367	...		73,843	..
Ghee ...	...	44,180			45,481	...
Other articles used for food and drink for men and animals.	11,92,411	951,653	...	12,86,259	1,026,552	...
CLASS II.						
Animals imported for slaughter.	...	...	104,263	...	...	104,627
CLASS III.						
Oil ...	...	21,444	...	..	24,020	...
Oilseeds ...	...	26,250	...	...	45,707	...
Other articles of fuel, lighting and washing.	1,84,134	1,125,474	...	2,60,619	1,308,691	...
CLASS IV.						
Articles for buildings ...	6,92,987	941,543	53,384,130	7,53,595	1,075,362	57,409,945
CLASS V.					...	...
Chemicals, drugs and spices	2,84,609	...	...	4,01,100	...	...
Gums ...	2,061	...	...	1,318	...	...
Other articles ...	93,828	...	...	59,136	27,223	...
CLASS VI.						
Tobacco ...	1,74,201	22,206	...	1,52,764	...	...
CLASS VII.						
Native cloth and articles made of it.	10,43,492	...	...	6,76,479	...	...
Other cloth and articles made of it.	15,38,736	...	...	27,52,368	...	...
Leather and articles made of leather.	7,34,678	...	...	7,66,546	...	...
Other articles ...	6,85,559	...	...	4,80,676	...	...
CLASS VIII.						
Metals and articles made wholly or partly of metal.	14,93,227	...	...	16,89,978	...	...
CLASS IX.						
Miscellaneous ...	...	...	...	...	...	...

Statement showing the octroi articles imported into Lahore during the undermentioned years—continued.

Names of Articles.	1912-13.			1913-14.		
	Value.	Weight.	Number.	Value.	Weight.	Number.
	Rs.	Maunds.		Rs.	Maunds.	
CLASS I.						
Wheat and wheat-flour...	...	946,100	..	..	1,130,092	...
Rice		182,478	...	...	197,737	
Barley and gram	...	206,233	...	...	240,585	...
Other food-grains ...		120,719	...	..	85,257	
Refined sugar	...	107,997	..	...	152,350	...
Unrefined sugar ...	...	65,116	...		68,893	
Ghee	...	43,779	...	...	46,583	...
Other articles used for food and drink for men and animals.	22,95,350	1,047,410	...	10,00,693	1,126,243	...
CLASS II.						
Animals imported for slaughter.	...	...	2,13,086	...	...	219,016
CLASS III.						
Oil ...	...	18,063	...	...	6,767	
Oilseeds		26,366	...	...	5,389	
Other articles of fuel, lighting and washing.	10,21,424	1,053,716 (tons 423)	..	2,77,045	1,179,650 (tons 557)	
CLASS IV.						
Articles for buildings ...	22,24,845	2,507,066	63,935,156	14,02,825	13,42,031	69,837,140
CLASS V.						
Chemical, drugs and spices.	3,37,731	...	...	4,49,058	...	
Gums	30,675	...	...	2,748	...	...
Other articles ...	24,716	...	...	1,02,112	...	...
CLASS VI.						
Tobacco	1,83,401	16,315	..	1,23,055	23,781	...
CLASS VII.						
Native cloth and articles made of it.	2,73,476	..	...	2,40,649	...	...
Other cloth and articles made of it.	57,08,252	...	...	41,26,859	...	
Leather and articles made of leather.	8,29,462	...	...	3,25,017	...	
Other articles.	4,18,735	...	..	1,00,053	...	
CLASS VIII.						
Metals and articles made wholly or partly of metal.	17,42,874	...	...	18,17,258	...	
CLASS IX.						
Miscellaneous ...	...	...	...	22,82,240	2,125	...

Statement showing the octroi articles imported into Lahore during the undermentioned years – concluded.

Names of Articles.	1914-15.			REMARKS.
	Value.	Weight.	Number.	
	Rs.	Mds.		
CLASS I.				
Wheat and wheat-flour ...	...	936,313	...	
Rice	...	210,581	...	
Barley and gram	...	194,467	...	
Other food-grains ...	...	152,329	...	
Refined sugar	...	103,277	...	
Unrefined sugar	..	74,329	..	
Ghee	...	51,176	...	
Other articles used for food and drink for men and animals.	13,22,752	1,175.362	...	
CLASS II.				
Animals imported for slaughter	...	...	07,961	
CLASS III.				
Oil	...	...	...	According to the new schedule oil and oil-seeds are included in Class IX from 1st August 1913.
Oilseeds	...		...	
Other articles of fuel, lighting and washing.	1,59,066	1,159,110 (tons 664)	...	
CLASS IV.				
Articles for buildings ...	11,16,652	1,635,934	68,343,215	
CLASS V.				
Chemicals, drugs and spices ...	4,85,110	...	...	
Gums	3,666	...	...	
Other articles	45,429	...	...	
CLASS VI.				
Tobacco	1,93,809	37,642	...	
CLASS VII.				
Native cloth and articles made of it.	2,88,548	...	...	
Other cloth and articles made of it.	43,59,654	...	...	
Leather and articles made of leather.	3,988	...	...	
Other articles	76,613	...	...	
CLASS VIII.				
Metals and articles made wholly or partly of metal.	23,11,378	...	...	
CLASS IX.				
Miscellaneous	29,68,532	22.179	...	New class added from 1st August 1913.

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